TOSHIBA
Leading Innovation

Selection Guide

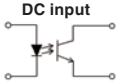
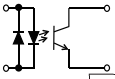
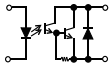
Photocouplers and Photorelays

2017 January

Contents

1. Transistor Couplers

Transistor Couplers

Part Number	Function		Current Transfer Ratio CTR(I_C/I_F) (%) ☆1~☆3 are defined in the below table	Current Transfer Ratio CTR(I_C/I_F) (%) @ I_F (mA) /V_{CE}(V) Ta=25°C	Collector -Emitter Voltage V_{CEO}(V)	Turn-on /Turn-off Time ton/toff (Typ.) (μs)	Operating Temperature T_{opr}(°C)	Isolation Voltage BVs (Vrms)	Toshiba Package
TLP785	DC input 		50 to 600☆1	5/5	80	1.5/50	-55 to 110	5000	DIP4 (TLP785)
TLP385			50 to 600☆1	5/5	80	0.5/40	-55 to 110	5000	4pin SO6L
TLP185(SE			50 to 600☆1	5/5	80	0.5/40	-55 to 110	3750	4pin SO6
TLP291(SE			50 to 600☆1	5/5	80	0.5/40	-55 to 110	3750	SO4
TLP291-4			50 to 400☆3	5/5	80	2/60	-55 to 110	2500	SO16 (4 Channel)
TLP383		Low input	50 to 600☆3	0.5/5	80	0.5/40	-55 to 125	5000	4pin SO6L
TLP183			50 to 600☆1	0.5/5	80	0.4/35	-55 to 125	3750	4pin SO6
TLP293			50 to 600☆1	0.5/5	80	0.4/35	-55 to 125	3750	SO4
TLP293-4 **(Note:1)**			50 to 600☆3	5/5	80	1.5/35	-55 to 125	3750	SO16 (4 Channel)
TLP388		High V_{CEO}	50 to 600☆1	5/5	350	3/80	-55 to 125	5000	4pin SO6L
TLP188			50 to 600☆1	5/5	350	3/80	-55 to 110	3750	4pin SO6
TLP184(SE	AC input 		50 to 600☆2	5/5	80	0.5/50	-55 to 110	3750	4pin SO6
TLP290(SE			50 to 600☆2	5/5	80	0.5/50	-55 to 110	3750	SO4
TLP290-4			50 to 400☆3	5/5	80	2/60	-55 to 110	2500	SO16 (4 Channel)
TLP182		Low input	50 to 600☆2	0.5/5	80	0.4/35	-55 to 125	3750	4pin SO6
TLP292			50 to 600☆2	0.5/5	80	0.4/35	-55 to 125	3750	SO4
TLP292-4 **(Note:1)**			50 to 600☆3	5/5	80	1.5/35	-55 to 125	3750	SO16 (4 Channel)
TLP387	**Darlington Transistor** High V_{CEO} 		1000(Min) 4000(Typ.)	1/1	300	5/80	-55 to 110	5000	4pin SO6L
TLP187			1000(Min) 4000(Typ.)	1/1	300	5/80	-55 to 110	3750	4pin SO6

Note1: The LA and LGB rank are made CTR rank of the low input current condition

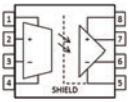
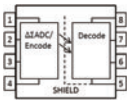
Current transfer ratio Rank

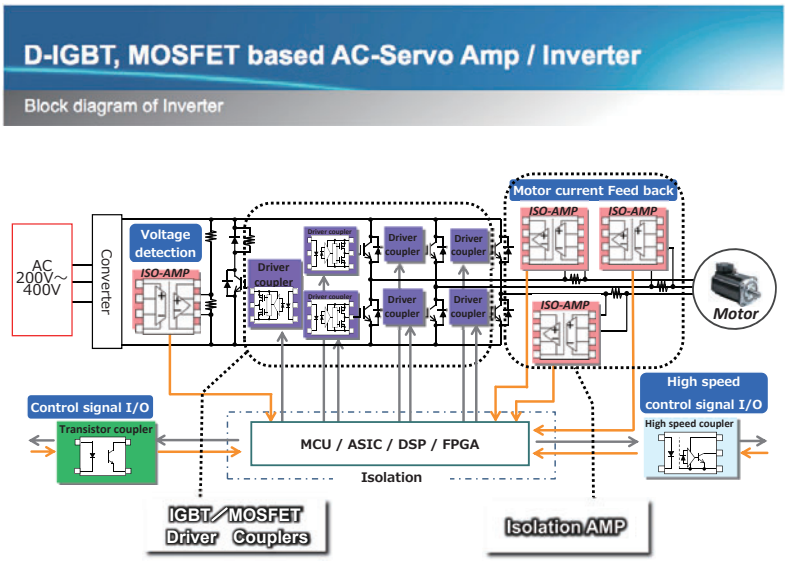
Rank	Relevant part	Current Transfer Ratio Min	Current Transfer Ratio Max	Marking of classification	unit
Blank	☆1 or ☆2 or ☆3	50	600 **(Note:2)**	Blank, YE, GR, GB, Y+, G, G+, B	%
Y	☆1 or ☆2	50	150	YE	
GR	☆1 or ☆2	100	300	GR	
GB	☆1 or ☆2 or ☆3	100	600	GB	
BL	☆1 or ☆2	200	600 **(Note:2)**	BL	
YH	☆1	75	150	Y+	
GRL	☆1	100	200	G	
GRH	☆1	150	300	G+	
BLL	☆1	200	400	B	

Note2: 400%(Max); TLP290-4, TLP291-4

2. Isolation Amplifiers/Delta-Sigma Modulators

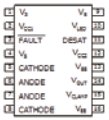
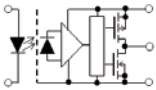
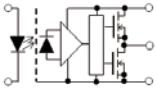
Isolation Amplifiers/Delta-Sigma Modulators

Part Number	Output Type	Supply Voltage V_{DD1} (V) V_{DD2} (V)	Supply Current (Max) I_{DD1} (mA) I_{DD2} (mA)	Operating Temperature T_{opr}(°C)	Gain (Ta=25°C)	Input offset voltage Vos (mV)	Equivalent input resistance R_{IN} (kΩ)	Isolation Voltage BVs (Vrms)	Toshiba Package
TLP7920	Analog output 	4.5 to 5.5 3.0 to 5.5	12 10	-40 to 105	8.2 (Typ.) None: 7.95 to 8.44 RankA: 8.12 to 8.28 RankB: 8.16 to 8.24 (V/V)	-0.7 to 2.1	78	5000	DIP8
TLP7820		4.5 to 5.5 3.0 to 5.5	12 10	-40 to 105		-0.6 to 2.4	78	5000	SO8L
TLP7930	Digital output 	4.5 to 5.5 3.0 to 5.5	12 8	-40 to 105	-1 to +1 (%)	-0.3 to 2.7	78	5000	DIP8
TLP7830		4.5 to 5.5 3.0 to 5.5	12 8	-40 to 105		-1.0 to 2.0	78	5000	SO8L



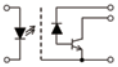
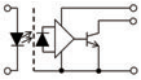
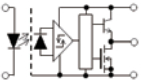
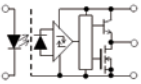
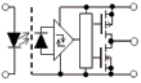
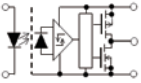
3. IC Photocouplers

IGBT/MOSFET Driver Couplers

Part Number	Output Type	I_{OP}(A) (Max) $I_{OP\ (H/L)}$	Function*	Supply Voltage Operating Range V_{CC} (V)	Operating temperature T_{opr} (°C)	Propagation Delay Time (Max) t_{pLH}/t_{pHL} (μs)	Threshold LED Input Current I_{FLH} (Max) (mA)	Isolation Voltage BVs (Vrms)	Toshiba Package
TLP5214	Smart Gate Driver 	±4.0	OCP, AMC RtoR, UVLO	15 to 30	-40 to 110	0.15/0.15	6.0	5000	SO16L
TLP5774	Totem-pole (Rail to Rail) 	±4.0	RtoR, UVLO	10 to 30	-40 to 110	0.15/0.15 (Buffer)	2.0	5000	SO6L
TLP5754		±4.0	RtoR, UVLO	15 to 30	-40 to 110	0.15/0.15 (Buffer)	4.0	5000	SO6L
TLP5772		±2.5	RtoR, UVLO	10 to 30	-40 to 110	0.15/0.15 (Buffer)	2.0	5000	SO6L
TLP5752		±2.5	RtoR, UVLO	15 to 30	-40 to 110	0.15/0.15 (Buffer)	4.0	5000	SO6L
TLP5771		±1.0	RtoR, UVLO	10 to 30	-40 to 110	0.15/0.15 (Buffer)	2.0	5000	SO6L
TLP5751		±1.0	RtoR, UVLO	15 to 30	-40 to 110	0.15/0.15 (Buffer)	4.0	5000	SO6L
TLP358H	Totem-pole 	±6.0	UVLO	15 to 30	-40 to 125	0.5/0.5 (Buffer)	5.0	3750	DIP8
TLP250H		±2.5	UVLO	10 to 30	-40 to 125	0.5/0.5 (Buffer)	5.0	3750	DIP8
TLP352		±2.5	UVLO	15 to 30	-40 to 125	0.2/0.2 (Buffer)	5.0	3750	DIP8
TLP350H		±2.5	UVLO	15 to 30	-40 to 125	0.5/0.5 (Buffer)	5.0	3750	DIP8
TLP5702		±2.5	UVLO	15 to 30	-40 to 110	0.2/0.2 (Buffer)	5.0	5000	SO6L
TLP700H		±2.5	UVLO	15 to 30	-40 to 125	0.5/0.5 (Buffer)	5.0	5000	SDIP6
TLP700A		±2.5	UVLO	15 to 30	-40 to 110	0.2/0.2 (Buffer)	5.0	5000	SDIP6
TLP152		±2.5	UVLO	10 to 30	-40 to 100	0.17/0.19 (Buffer)	7.5	3750	5pin SO6
TLP351H		±0.6	-	10 to 30	-40 to 125	0.7/0.7 (Buffer)	5.0	3750	DIP8
TLP351A		±0.6	-	10 to 30	-40 to 100	0.5/0.5 (Buffer)	5.0	3750	DIP8
TLP5701		±0.6	UVLO	10 to 30	-40 to 110	0.5/0.5 (Buffer)	5.0	5000	SO6L
TLP701H		±0.6	-	10 to 30	-40 to 125	0.7/0.7 (Buffer)	5.0	5000	SDIP6
TLP701A		±0.6	-	10 to 30	-40 to 100	0.5/0.5 (Buffer)	5.0	5000	SDIP6
TLP705A		±0.6	-	10 to 30	-40 to 100	0.2/0.2 (Buffer)	7.5	5000	SDIP6
TLP2451A		±0.6	-	10 to 30	-40 to 125	0.5/0.5 (Buffer)	5.0	3750	SO8
TLP151A		±0.6	-	10 to 30	-40 to 110	0.5/0.5 (Buffer)	5.0	3750	5pin SO6
TLP155E		±0.6	-	10 to 30	-40 to 100	0.2/0.2 (Buffer)	7.5	3750	5pin SO6

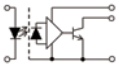
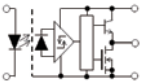
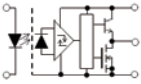
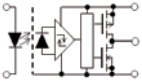
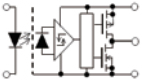
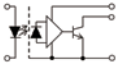
* OCP: over current protection, AMC:active miller clamp, RtoR: rail to rail output, UVLO: under voltage lock out

IPM Driver Couplers

Part Number	Data Rate and Output Type	Supply Voltage V_{CC} (V) **(Note:1)**	High/Low -level Supply Current I_{CC}(Max) (mA)	Operating Temperature T_{opr}(°C)	Propagation Delay Time (Max) t_{pLH}/t_{pHL} (μs)	Threshold LED Input Current I_{FLH}/I_{FHL} (Max) (mA)	Isolation Voltage BVs (Vrms)	Toshiba Package
TLP109(IGM)	**1Mbps** Open-collector 	~30	1.0(μA) (I_{CCH})	-55 to 125	1.0/1.0	Current Transfer Ratio:25%(Min) @I_F=10mA,V_{CC}=4.5V, V_O=0.4V	3750	5pin SO6
TLP754	**1Mbps** Open-collector 	4.5 to 30	1.3	-40 to 125	0.55/0.4	-/5.0 (Inverter)	5000	DIP8
TLP2704		4.5 to 30	1.3	-40 to 125	0.55/0.4	-/5.0 (Inverter)	5000	SO6L
TLP714		4.5 to 30	1.3	-40 to 125	0.55/0.4	-/5.0 (Inverter)	5000	SDIP6
TLP2404		4.5 to 30	1.3	-40 to 125	0.55/0.4	-/5.0 (Inverter)	3750	SO8
TLP104		4.5 to 30	1.3	-40 to 125	0.55/0.4	-/5.0 (Inverter)	3750	5pin SO6
TLP2955	**5Mbps** Totem-pole 	3 to 20	3.0	-40 to 125	0.25/0.25	1.6/- (Buffer)	5000	DIP8
TLP715		4.5 to 20	3.0	-40 to 100	0.25/0.25	3.0/- (Buffer)	5000	SDIP6
TLP2405		4.5 to 20	3.0	-40 to 100	0.25/0.25	1.6/- (Buffer)	3750	SO8
TLP2355		3 to 20	3.0	-40 to 125	0.25/0.25	1.6/- (Buffer)	3750	5pin SO6
TLP2958	**5Mbps** Totem-pole 	3 to 20	3.0	-40 to 125	0.25/0.25	-/1.6 (Inverter)	5000	DIP8
TLP718		4.5 to 20	3.0	-40 to 100	0.25/0.25	-/3.0 (Inverter)	5000	SDIP6
TLP2408		4.5 to 20	3.0	-40 to 100	0.25/0.25	-/1.6 (Inverter)	3750	SO8
TLP2358		3 to 20	3.0	-40 to 125	0.25/0.25	-/1.6 (Inverter)	3750	5pin SO6
TLP2748	**10Mbps** Totem-pole 	4.5 to 30	3.0	-40 to 110	0.12/0.12	-/1.6 (Inverter)	5000	SO6L
TLP2348		4.5 to 30	3.0	-40 to 110	0.12/0.12	-/1.6 (Inverter)	3750	5pin SO6
TLP2745	**10Mbps** Totem-pole 	4.5 to 30	3.0	-40 to 110	0.12/0.12	1.6/- (Buffer)	5000	SO6L
TLP2345		4.5 to 30	3.0	-40 to 110	0.12/0.12	1.6/- (Buffer)	3750	5pin SO6

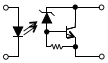
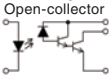
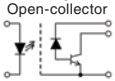
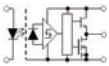
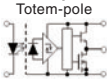
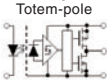
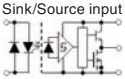
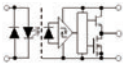
Note1: Recommended Operating Condition

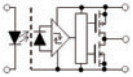
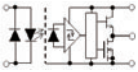
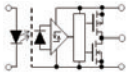
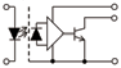
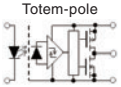
High speed Logic Couplers (5V Operating)

Part Number	Data Rate and Output Type	Supply Voltage V_{CC} (V) **(Note:1)**	High/Low -level Supply Current I_{CC} (Max) (mA)	Operating Temperature T_{opr} (°C)	Propagation Delay Time (Max) t_{pLH}/t_{pHL} (μs)	Threshold LED Input Current I_{FLH}/I_{FHL} (Max) (mA)	Isolation Voltage BVs (Vrms)	Toshiba Package
TLP754	**1Mbps** Open-collector 	4.5 to 30	1.3	-40 to 125	0.55/0.4	-/5.0 (Inverter)	5000	DIP8
TLP2704		4.5 to 30	1.3	-40 to 125	0.55/0.4	-/5.0 (Inverter)	5000	SO6L
TLP714		4.5 to 30	1.3	-40 to 125	0.55/0.4	-/5.0 (Inverter)	5000	SDIP6
TLP2404		4.5 to 30	1.3	-40 to 125	0.55/0.4	-/5.0 (Inverter)	3750	SO8
TLP104		4.5 to 30	1.3	-40 to 125	0.55/0.4	-/5.0 (Inverter)	3750	5pin SO6
TLP715	**5Mbps** Totem-pole 	4.5 to 20	3.0	-40 to 100	0.25/0.25	3.0/- (Buffer)	5000	SDIP6
TLP2405		4.5 to 20	3.0	-40 to 100	0.25/0.25	1.6/- (Buffer)	3750	SO8
TLP2105 **(Note:2)**		4.5 to 20	6.0	-40 to 100	0.25/0.25	1.6/- (Buffer)	2500	SO8
TLP718	**5Mbps** Totem-pole 	4.5 to 20	3.0	-40 to 100	0.25/0.25	-/3.0 (Inverter)	5000	SDIP6
TLP2408		4.5 to 20	3.0	-40 to 100	0.25/0.25	-/1.6 (Inverter)	3750	SO8
TLP2108 **(Note:2)**		4.5 to 20	6.0	-40 to 100	0.25/0.25	-/1.6 (Inverter)	2500	SO8
TLP2748	**10~20Mbps** Totem-pole 	4.5 to 30	3.0	-40 to 110	0.12/0.12	-/1.6 (Inverter)	5000	SO6L
TLP116A		4.5 to 5.5	5.0	-40 to 100	0.06/0.06	-/5.0 (Inverter)	3750	5pin SO6
TLP2348		4.5 to 30	3.0	-40 to 110	0.12/0.12	-/1.6 (Inverter)	3750	5pin SO6
TLP2745	**10~20Mbps** Totem-pole 	4.5 to 30	3.0	-40 to 110	0.12/0.12	1.6/- (Buffer)	5000	SO6L
TLP2345		4.5 to 30	3.0	-40 to 110	0.12/0.12	1.6/- (Buffer)	3750	5pin SO6
TLPN137	**10~20Mbps** Open-collector 	4.5 to 5.5	4.0	-40 to 85	0.075/0.075	-/5.0 (Inverter)	5000	DIP8
TLP2418		4.5 to 5.5	5.0	-40 to 125	0.075/0.075	-/5.0 (Inverter)	3750	SO8
TLP2118E **(Note:2)**		4.5 to 5.5	10	-40 to 100	0.075/0.075	-/5.0 (Inverter)	2500	SO8
TLP118		4.5 to 5.5	5.0	-40 to 125	0.06/0.06	-/5.0 (Inverter)	3750	5pin SO6

Note1: Recommended Operating Condition
Note2: Dual channel type

High speed Logic Couplers (3.3V/5V Operating)

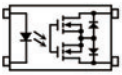
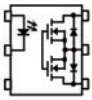
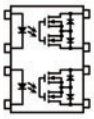
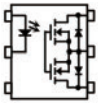
Part Number	Data Rate and Output Type	Supply Voltage V_{CC} (V) **(Note:1)**	High/Low -level Supply Current I_{CC} (Max) (mA)	Operating Temperature T_{opr} (°C)	Propagation Delay Time (Max) t_{pLH}/t_{pHL} (μs)	Threshold LED Input Current I_{FLH}/I_{FHL} (Max) (mA)	Isolation Voltage BVs (Vrms)	Toshiba Package
TLP2701	**20kbps** Open-collector 	**(Note:2)**	-	-55 to 125	30/30	Current Transfer Ratio:50%(Min) @I_F=1mA,V_{CE}=5V	5000	4pin SO6L
TLP2301		**(Note:2)**	-	-55 to 125	30/30		3750	4pin SO6
TLP2403	**100kbps** Open-collector 	~16	0.01/1.5	-40 to 100	90/30	Current Transfer Ratio:400%(Min) @I_F=0.5mA,V_{cc}=4.5V, V_o=0.4V	3750	SO8
TLP2703	**100kbps** Open-collector 	4.5 to 18	0.01/1.5	-40 to 125	90/20	Current Transfer Ratio:900%(Min) @I_F=0.5mA,V_{cc}=4.5V, V_o=0.4V	5000	SO6L
TLP2303		4.5 to 18	0.01/1.5	-40 to 125	90/20		3750	5pin SO6
TLP759	**1Mbps** Open-collector 	~30	1.0(μA) (I_{CCH})	-55 to 100	0.8/0.8	Current Transfer Ratio:20%(Min) @I_F=16mA,V_{cc}=4.5V, V_o=0.4V	5000	DIP8
TLP2409		~30	1.0(μA) (I_{CCH})	-55 to 125	0.8/0.8		3750	SO8
TLP109		~30	1.0(μA) (I_{CCH})	-55 to 125	0.8/0.8		3750	5pin SO6
TLP719		~30	1.0(μA) (I_{CCH})	-55 to 125	0.8/0.8		3750	5pin SO6
TLP2309		2.7 to 20	1.0(μA) (I_{CCH})	-40 to 110	1.0/1.0	Current Transfer Ratio:15%(Min) @I_F=10mA,V_{cc}=3.3V, V_o=0.4V	3750	5pin SO6
TLP2955	**5Mbps** Totem-pole 	3.0 to 20	3.0	-40 to 125	0.25/0.25	1.6/- (Buffer)	5000	DIP8
TLP2355		3.0 to 20	3.0	-40 to 125	0.25/0.25	1.6/- (Buffer)	3750	5pin SO6
TLP2958	**5Mbps** Totem-pole 	3.0 to 20	3.0	-40 to 125	0.25/0.25	-/1.6 (Inverter)	5000	DIP8
TLP2358		3.0 to 20	3.0	-40 to 125	0.25/0.25	-/1.6 (Inverter)	3750	5pin SO6
TLP2710	**5Mbps** Totem-pole 	2.7 to 5.5	0.3	-40 to 125	0.25/0.25	1.0/- (Buffer)	5000	SO6L
TLP2110* **(Note:5)**		2.7 to 5.5	0.6	-40 to 125	0.25/0.25	1.0/- (Buffer)	2500	SO8
TLP2310 **(Note:4)**		2.7 to 5.5	0.3	-40 to 125	0.25/0.25	1.0/- (Buffer)	3750	5pin SO6
TLP2395	**5Mbps** Sink/Source input 	3.0 to 20	3.0	-40 to 125	0.25/0.25	2.3/- (Buffer)	3750	5pin SO6
TLP2398	**5Mbps** Sink/Source input 	3.0 to 20	3.0	-40 to 125	0.25/0.25	-/2.3 (Inverter)	3750	5pin SO6

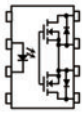
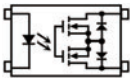
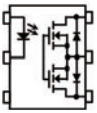
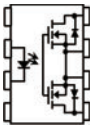
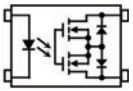
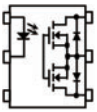
Part Number	Data Rate and Output Type	Supply Voltage V_{CC} (V) **(Note:1)**	High/Low -level Supply Current I_{CC} (Max) (mA)	Operating Temperature T_{opr} (°C)	Propagation Delay Time (Max) t_{pLH}/t_{pHL} (μs)	Threshold LED Input Current I_{FLH}/I_{FHL} (Max) (mA)	Isolation Voltage BVs (Vrms)	Toshiba Package
TLP2261 **(Note:4,5)**	**10~20Mbps** Totem-pole 	2.7 to 5.5	2.0	-40 to 125	0.08/0.08	1.6@Ta=125°C (Inverter)	5000	SO8L
TLP2761 **(Note:4)**		2.7 to 5.5	1.0	-40 to 125	0.08/0.08	1.6@Ta=125°C (Inverter)	5000	SO6L
TLP2766		2.7 to 5.5	3.0	-40 to 125	0.055/0.055	-/3.5 (Inverter)	5000	SDIP6
TLP2161 **(Note:5)**		2.7 to 5.5	2.0	-40 to 125	0.08/0.08	1.6@Ta=125°C (Inverter)	2500	SO8
TLP2466		2.7 to 5.5	3.0	-40 to 125	0.055/0.055	-/3.5 (Inverter)	3750	SO8
TLP2160 **(Note:5)**		2.7 to 5.5	5.0	-40 to 125	0.055/0.055	-/3.5 (Inverter)	2500	SO8
TLP2361		2.7 to 5.5	1.0	-40 to 125	0.08/0.08	1.6@Ta=125°C (Inverter)	3750	5pin SO6
TLP2366		2.7 to 5.5	3.0	-40 to 125	0.055/0.055	-/3.5 (Inverter)	3750	5pin SO6
TLP2170*		2.7 to 5.5	0.8	-40 to 125	0.06/0.06	1.0/- (Buffer)	2500	SO8
TLP2391	**10Mbps** Sink/Source input 	2.7 to 5.5	1.0	-40 to 125	0.10/0.10	2.3@V_{cc}=3.3V 2.5@V_{cc}=5V (Inverter)	3750	5pin SO6
TLP2270 **(Note:4,5)**	**20Mbps** Totem-pole 	2.7 to 5.5	0.4	-40 to 125	0.06/0.06	1.0/- (Buffer)	3750	SO8L
TLP2770 **(Note:4)**		2.7 to 5.5	0.4	-40 to 125	0.06/0.06	1.0/- (Buffer)	5000	SO6L
TLP2370 **(Note:4)**		2.7 to 5.5	0.4	-40 to 125	0.06/0.06	1.0/- (Buffer)	3750	5pin SO6
TLP2962	**10~20Mbps** Open-collector 	2.7 to 5.5	4.0	-40 to 125	0.075/0.075	-/5.0 (Inverter)	5000	DIP8
TLP2662 **(Note:5)**		2.7 to 5.5	8.0	-40 to 125	0.075/0.075	-/5.0 (Inverter)	5000	DIP8
TLP2768A		2.7 to 5.5	4.0	-40 to 125	0.06/0.06	-/5.0 (Inverter)	5000	SO6L
TLP2768		2.7 to 5.5	4.0	-40 to 125	0.06/0.06	-/5.0 (Inverter)	5000	SDIP6
TLP2468		2.7 to 5.5	4.0	-40 to 125	0.06/0.06	-/5.0 (Inverter)	3750	SO8
TLP2168 **(Note:5)**		2.7 to 5.5	8.0	-40 to 125	0.06/0.06	-/5.0 (Inverter)	2500	SO8
TLP2362		2.7 to 5.5	4.0	-40 to 125	0.10/0.10	-/5.0 (Inverter)	3750	5pin SO6
TLP2368		2.7 to 5.5	4.0	-40 to 125	0.06/0.06	-/5.0 (Inverter)	3750	5pin SO6
TLP2767	**50Mbps** Totem-pole 	2.7 to 5.5	2.0	-40 to 125	0.02/0.02	-/4.0 (Inverter)	5000	SO6L
TLP2367		2.7 to 5.5	2.0	-40 to 125	0.02/0.02	-/4.0 (Inverter)	3750	5pin SO6

Note1: Recommended Operating Condition
Note2: V_{CEO}=40V
Note3: Recommended Operating Temperature is 0°C to 70°C
Note4: Ultra low consumption
Note5: Dual channel type
*: Under development

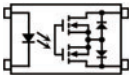
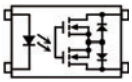
4. Photorelays

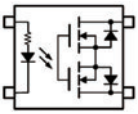
MOSFET Output, 1-Form-A, 2-Form-A

Part Number	Pin Configuration	OFF-state Output Terminal Voltage V_{OFF} (V)	ON-state Current I_{ON} (Max) (A)	ON-state Resistance R_{ON} (Max) (Ω)	ON-state Resistance @I_F (mA)	Trigger LED Current I_{FT} (Max) (mA)	Isolation Voltage BV_S (Vrms)	Toshiba Package
TLP171A		60	±0.4	2	0.5	0.2	1500	2.54SOP4
TLP171D		200	±0.2	8	0.5	0.2	1500	2.54SOP4
TLP171GA		400	±0.1	35	0.5	0.2	1500	2.54SOP4
TLP171J		600	±0.07	60	0.5	0.2	1500	2.54SOP4
TLP170A		60	±0.4	2	2	1	1500	2.54SOP4
TLP170D		200	±0.2	8	2	1	1500	2.54SOP4
TLP170G		350	±0.1	50	2	1	1500	2.54SOP4
TLP170J		600	±0.09	60	2	1	1500	2.54SOP4
TLP172A		60	±0.4	2	5	3	1500	2.54SOP4
TLP172G		350	±0.11	50	5	3	1500	2.54SOP4
TLP174G		350	±0.12	35	5	3	1500	2.54SOP4
TLP174GA		400	±0.12	35	5	3	1500	2.54SOP4
TLP175A		60	±0.1	50	2	1	3750	4pin SO6
TLP176A		60	±0.4	2	5	3	1500	2.54SOP4
TLP176D		200	±0.2	8	5	3	1500	2.54SOP4
TLP176G		350	±0.12	35	5	3	1500	2.54SOP4
TLP176GA		400	±0.12	35	5	3	1500	2.54SOP4
TLP172AM		60	±0.5	2	5	3	3750	4pin SO6
TLP172GM		350	±0.11	50	5	3	3750	4pin SO6
TLP192A		60	±0.4	2	5	3	1500	2.54SOP6
TLP192G		350	±0.11	50	5	3	1500	2.54SOP6
TLP197A		60	±0.4	2	5	3	1500	2.54SOP6
TLP197G		350	±0.12	35	5	3	1500	2.54SOP6
TLP197GA		400	±0.12	35	5	3	1500	2.54SOP6
TLP200D		200	±0.2	8	5	3	1500	2.54SOP8
TLP202A		60	±0.4	2	5	3	1500	2.54SOP8
TLP202G		350	±0.11	50	5	3	1500	2.54SOP8
TLP206A		60	±0.4	2	5	3	1500	2.54SOP8
TLP206G		350	±0.12	35	5	3	1500	2.54SOP8
TLP206GA		400	±0.12	35	5	3	1500	2.54SOP8
TLP3100		20	±2.5	0.05	5	3	1500	2.54SOP6
TLP3106		30	±4.0	0.04	5	3	1500	2.54SOP6
TLP3102		40	±2.5	0.06	5	3	1500	2.54SOP6
TLP3103		60	±2.3	0.07	5	3	1500	2.54SOP6
TLP3105		100	±1.4	0.2	5	3	1500	2.54SOP6
TLP3107		60	±3.3	0.06	5	3	1500	2.54SOP6
TLP3109		100	±2.0	0.07	5	3	1500	2.54SOP6

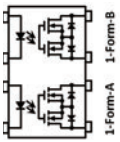
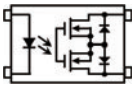
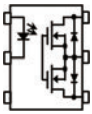
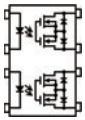
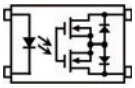
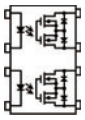
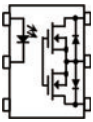
Part Number	Pin Configuration	OFF-state Output Terminal Voltage V_{OFF} (V)	ON-state Current I_{ON} (Max) (A)	ON-state Resistance R_{ON} (Max) (Ω)	ON-state Resistance @I_F (mA)	Trigger LED Current I_{FT} (Max) (mA)	Isolation Voltage BV_S (Vrms)	Toshiba Package
TLP3122		60	±1	0.7	5	3	1500	2.54SOP4
TLP3127		60	±1.7	0.13	5	3	1500	2.54SOP4
TLP3123		40	±1	0.13	5	3	1500	2.54SOP4
TLP3125		400	±0.2	4	5	3	1500	2.54SOP8
TLP240A		60	±0.5	2	5	3	5000	DIP4
TLP240D		200	±0.25	8	5	3	5000	DIP4
TLP240G		350	±0.1	50	5	3	5000	DIP4
TLP240GA		400	±0.12	35	5	3	5000	DIP4
TLP240J		600	±0.09	60	5	3	5000	DIP4
TLP241A		40	±2.0	0.15	5	3	5000	DIP4
TLP3543		20	±4	0.05	5	3	2500	DIP6
TLP3544		40	±3.5	0.06	5	3	2500	DIP6
TLP3545		60	±3	0.07	5	3	2500	DIP6
TLP3546		100	±2	0.2	5	3	2500	DIP6
TLP3547		60	±5	0.5	5	5	2500	DIP8
TLP3548		400	±0.4	5	2	1	2500	DIP8
TLP3549		600	±0.6	2	5	5	2500	DIP8
TLP3553		20	±3	0.08	5	3	2500	DIP4
TLP3554		40	±2.5	0.15	5	3	2500	DIP4
TLP3555		60	±2	0.20	5	3	2500	DIP4
TLP3556		100	±1	0.70	5	3	2500	DIP4
TLP592A		60	±0.5	2	5	3	2500	DIP6
TLP592G		350	±0.12	50	5	3	2500	DIP6
TLP597A		60	±0.5	2	5	3	2500	DIP6
TLP597G		350	±0.12	35	5	3	2500	DIP6
TLP597GA		400	±0.12	35	5	3	2500	DIP6
TLP598AA		60	±0.5	2	5	3	2500	DIP6
TLP598GA		400	±0.15	12	5	3	2500	DIP6
TLP797GA		400	±0.12	35	5	3	5000	DIP6
TLP797J		600	±0.1	45	10	5	5000	DIP6
TLP798GA		400	±0.15	12	5	5	5000	DIP6

MOSFET Output, 1-Form-A

Part Number	Pin Configuration	OFF-state Output Terminal Voltage V_{OFF} (V)	ON-state Current I_{ON} (Max) (A)	ON-state Resistance R_{ON} (Max) (Ω)	ON-state Resistance @I_F (mA)	Trigger LED Current I_{FT} (Max) (mA)	Isolation Voltage BV_S (Vrms)	Toshiba Package
TLP3203		20	±0.9	0.22	5	3	1500	SSOP4
TLP3212		60	±0.4	1.5	5	5	1500	SSOP4
TLP3214		40	±0.25	3	5	4	1500	SSOP4
TLP3215		40	±0.3	1.5	5	4	1500	SSOP4
TLP3216		40	±0.12	15	5	4	1500	SSOP4
TLP3217		80	±0.12	12	5	5	1500	SSOP4
TLP3220		100	±0.08	14	10	5	1500	SSOP4
TLP3230		20	±0.16	8	5	4	1500	SSOP4
TLP3231		20	±0.45	1.2	5	4	1500	SSOP4
TLP3240		40	±0.12	14	5	3	1500	SSOP4
TLP3241		40	±0.14	10	5	3	1500	SSOP4
TLP3250		20	±0.2	5	5	3	1500	SSOP4
TLP3275		50	±0.3	1.5	5	3	1500	SSOP4
TLP3303		20	±0.9	0.22	5	3	500	USOP4
TLP3306		75	±0.4	1.5	5	3	500	USOP4
TLP3312		60	±0.4	1.5	5	3	500	USOP4
TLP3315		40	±0.3	1.5	5	3	500	USOP4
TLP3316		40	±0.12	15	5	3	500	USOP4
TLP3317		80	±0.12	12	5	3	500	USOP4
TLP3319		80	±0.2	8	5	3	500	USOP4
TLP3320		100	±0.1	14	5	3	500	USOP4
TLP3330		20	±0.16	8	5	3	500	USOP4
TLP3375		50	±0.3	1.5	5	3	500	USOP4
TLP3340		40	±0.12	14	5	3	500	USOP4
TLP3341		40	±0.14	10	5	3	500	USOP4
TLP3342		40	±0.1	20	5	3	500	USOP4
TLP3350		20	±0.2	5	5	3	500	USOP4
TLP3351		60	±0.12	15	5	3	500	USOP4
TLP3403		20	±1.0	0.22	5	3	500	VSON4
TLP3412		60	±0.4	1.5	5	3	500	VSON4
TLP3417		80	±0.12	12	5	3	500	VSON4
TLP3419		80	±0.2	8	5	3	500	VSON4
TLP3420		100	±0.1	14	5	3	500	VSON4
TLP3431		20	±0.45	1.2	5	3	500	VSON4
TLP3440		40	±0.12	14	5	3	500	VSON4
TLP3441		40	±0.14	10	5	3	500	VSON4
TLP3442		40	±0.1	20	5	3	500	VSON4
TLP3450		20	±0.2	5	5	3	500	VSON4
TLP3451		60	±0.12	15	5	3	500	VSON4
TLP3475		50	±0.3	1.5	5	3	500	VSON4
TLP3406S		30	±0.15	0.2	5	3	500	S-VSON4

Part Number	Pin Configuration	OFF-state Output Terminal Voltage V_{OFF} (V)	ON-state Current I_{ON} (Max) (A)	ON-state Resistance R_{ON} (Max) (Ω)	ON-state Resistance @V_{IN} (V)	Operating voltage V_{FON} (Max) (V)	Isolation Voltage BV_S (Vrms)	Toshiba Package
TLP3403R		20	1	0.22	5	3	500	VSONR4
TLP3412R		60	0.4	1.5	5	3	500	VSONR4
TLP3475R		50	0.3	1.5	5	3	500	VSONR4

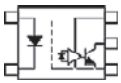
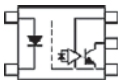
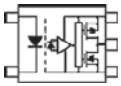
MOSFET Output, 1-Form-B,2-Form-B and 1-Form-A/1-Form-B

Part Number	Pin Configuration	OFF-state Output Terminal Voltage V_{OFF} (V)	ON-state Current I_{ON} (Max) (A)	ON-state Resistance R_{ON} (Max) (Ω)	ON-state Resistance @I_F (mA)	Trigger LED Current I_{FT} (Max) (mA)	Isolation Voltage BV_S (Vrms)	Toshiba Package
TLP4006G		350	±0.12	25	1-Form-A: 5 1-Form-B: 0	3	2500	DIP8
TLP4026G		350	±0.12	25	1-Form-A: 5 1-Form-B: 0	3	1500	2.54SOP8
TLP4176G		350	±0.12	25	0	3	1500	2.54SOP4
TLP4197G		350	±0.12	25	0	3	1500	2.54SOP6
TLP4206G		350	±0.12	25	0	3	1500	2.54SOP8
TLP4227G		350	±0.15	25	0	3	2500	DIP4
TLP4227G-2		350	±0.15	25	0	3	2500	DIP8
TLP4597G		350	±0.15	25	0	3	2500	DIP6

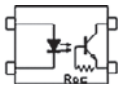
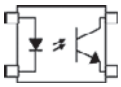
5. Automotive Devices

Photocouplers

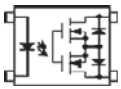
IC Output

Part Number	Pin Configuration	Characteristics					Isolation Voltage BV_S (Vrms)	Clearance /Creepage Distance	Toshiba Package	AEC-Q100
		Output Type	Data Rate (Standard)	I_{FHL} (Max) (mA)	T_{stg}(˚C) (Min) to (Max)	T_{opr}(˚C) (Min) to (Max)				
TLX9304		Open collector	1 Mbps	5 (Inverter)	−55 to 150	−40 to 125	3750	5 mm	5pin SO6	-
TLX9378		Open collector	10 Mbps	5 (Inverter)	−55 to 150	−40 to 125	3750	5 mm	5pin SO6	-
TLX9376		Totempole	20 Mbps	4 (Inverter)	−55 to 150	−40 to 125	3750	5 mm	5pin SO6	-

Transistor Output

Part Number	Pin Configuration	Characteristics					Isolation Voltage BV_S (Vrms)	Clearance /Creepage Distance	Toshiba Package	AEC-Q100
		I_C/I_F(%) (Min) to (Max) @I_F(mA)/ V_{CE}(V)	$V_{CE\ (sat)}$(V) (Max) @I_C(mA)/ I_F(mA)	V_{CEO} (Min) (V)	T_{stg}(˚C) (Min) to (Max)	T_{opr}(˚C) (Min) to (Max)				
TLX9000		100 to 900 @ 5 / 5	0.4 @ 2.4 / 8	40	−55 to 150	−40 to 125	3750	5 mm	SO4	-
TLX9300		100 to 900 @ 5 / 5	0.4 @ 2.4 / 8	40	−55 to 150	−40 to 125	3750	5 mm	4pin SO6	-
TLX9291A		50 to 600 @ 5 / 5	0.4 @ 2.4 / 8	80	−55 to 150	−40 to 125	3750	5 mm	SO4	-
TLX9185A		50 to 600 @ 5 / 5	0.4 @ 2.4 / 8	80	−55 to 150	−40 to 125	3750	5 mm	4pin SO6	-

Photorelays, 1-Form-A

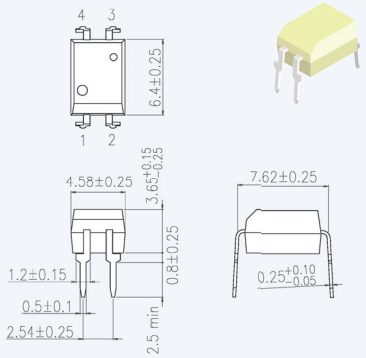
Part Number	Pin Configuration	OFF-State Output Terminal Voltage V_{OFF} (Max) (V)	ON-State Current I_{ON} (Max) (mA)	ON-state Resistance		Trigger LED Current I_{FT} (Max) (mA)	Isolation Voltage BV_S (Vrms)	Clearance /Creepage Distance	Toshiba Package	AEC-Q100
				R_{ON} (Max) (Ω)	@I_{ON}(mA) /I_F (mA)					
TLX9175J		600	15	335	15/10	3	3750	5 mm	4pin SO6	-

6. Dimensional Outline

Package Dimension Drawing

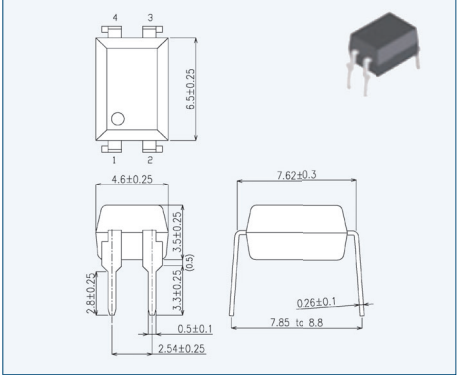
DIP4

Unit:mm



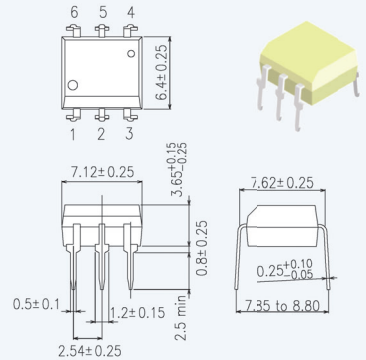
DIP4 (TLP785)

Unit:mm



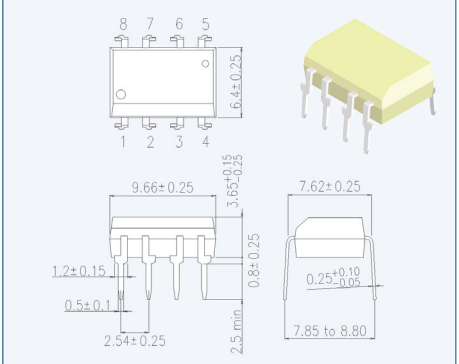
DIP6

Unit:mm



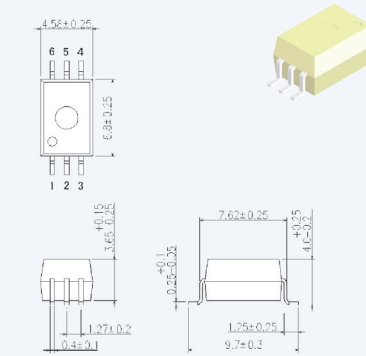
DIP8

Unit:mm



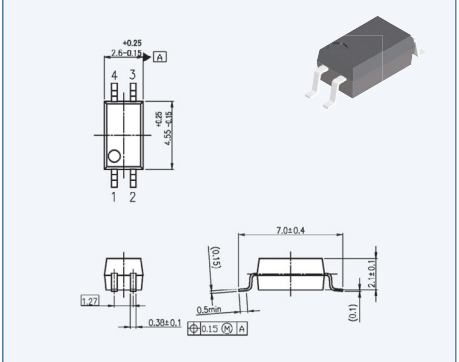
SDIP6

Unit:mm



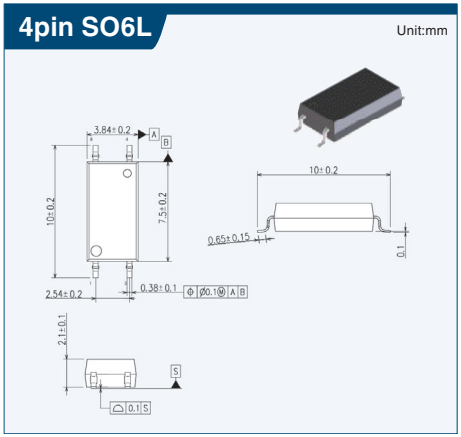
SO4

Unit:mm



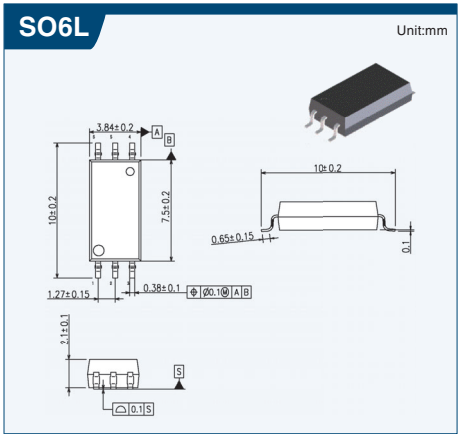
4pin SO6L

Unit:mm



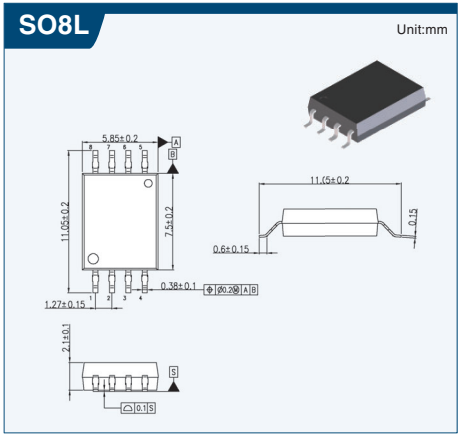
SO6L

Unit:mm



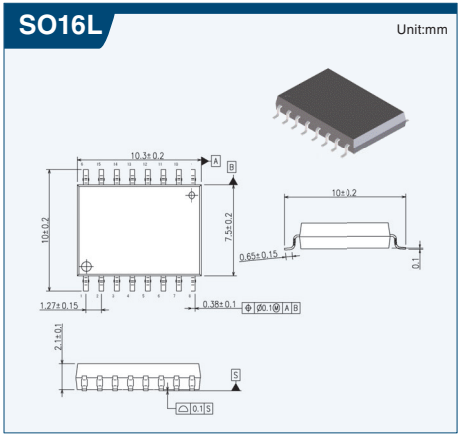
SO8L

Unit:mm



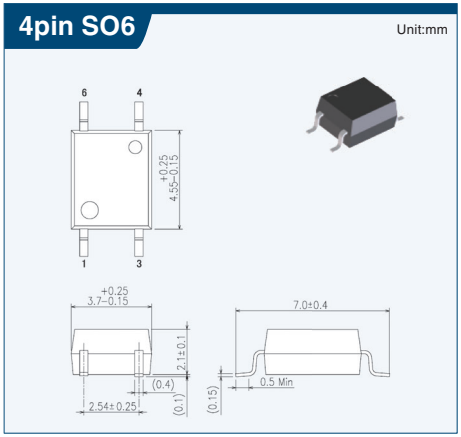
SO16L

Unit:mm



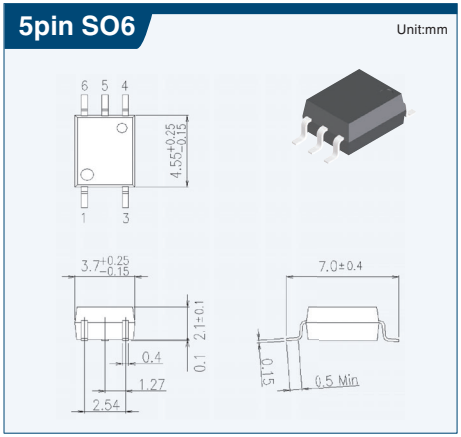
4pin SO6

Unit:mm



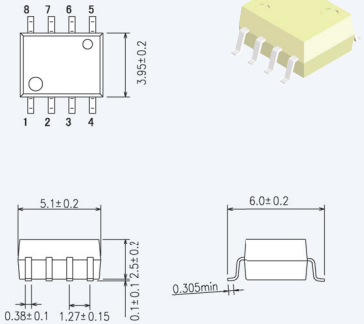
5pin SO6

Unit:mm



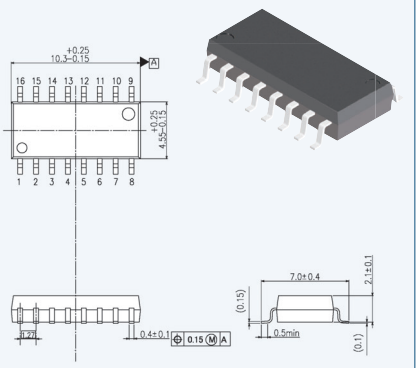
SO8

Unit:mm



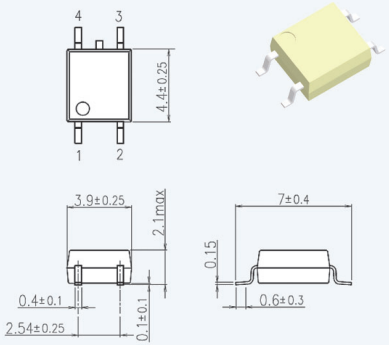
SO16

Unit:mm



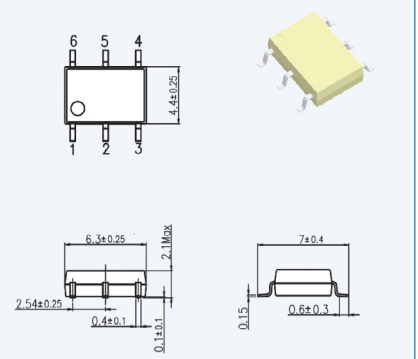
2.54SOP4

Unit:mm



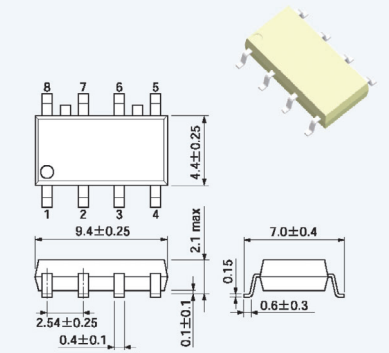
2.54SOP6

Unit:mm



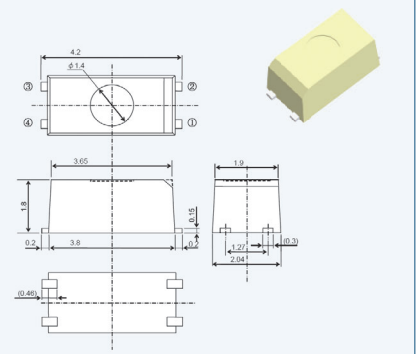
2.54SOP8

Unit:mm



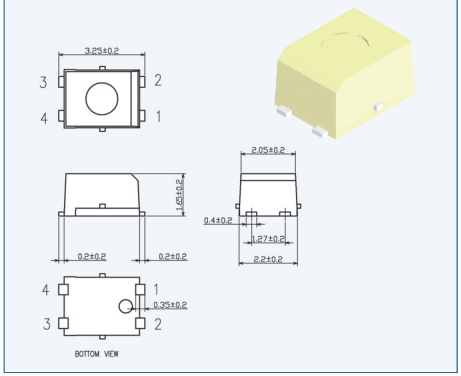
SSOP4

Unit:mm



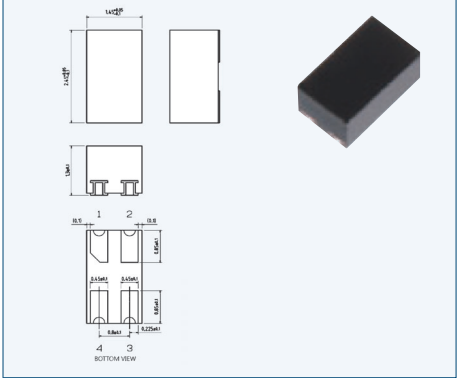
USOP4

Unit:mm



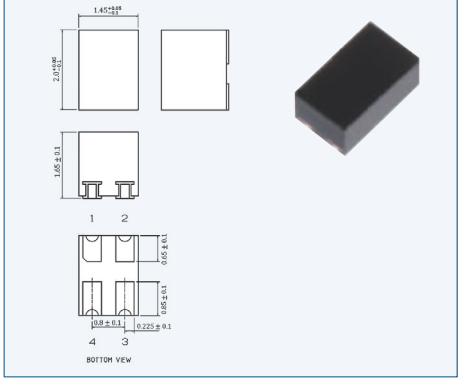
VSON4

Unit:mm



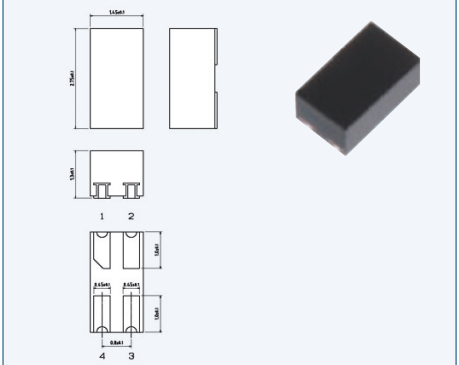
S-VSON4

Unit:mm



VSONR4

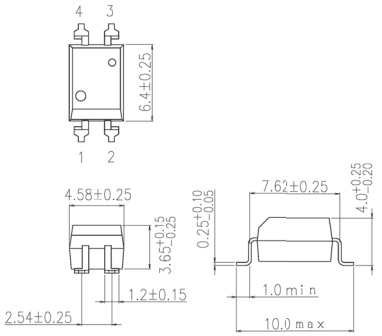
Unit:mm



Lead Form Options

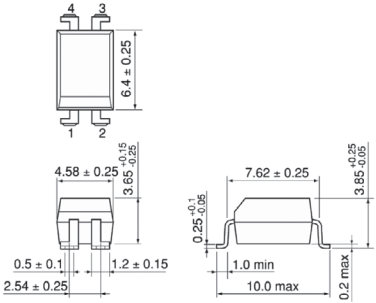
DIP4(LF1) / (TP1)

Unit:mm



DIP4(LF5) / (TP5)

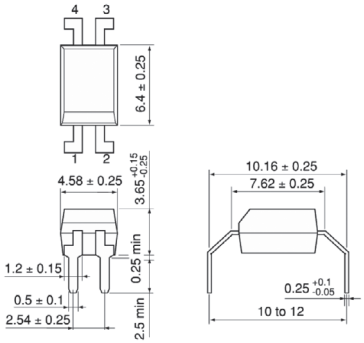
Unit:mm



DIP4(LF2)

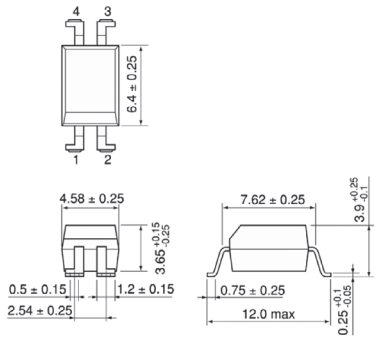
(DIP4 Ftype)

Unit:mm



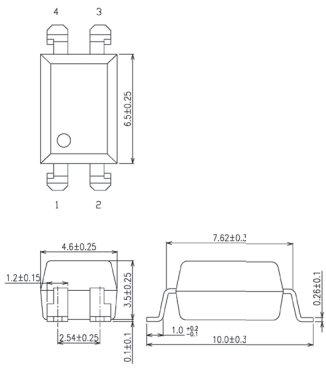
DIP4(LF4) / (TP4)

Unit:mm



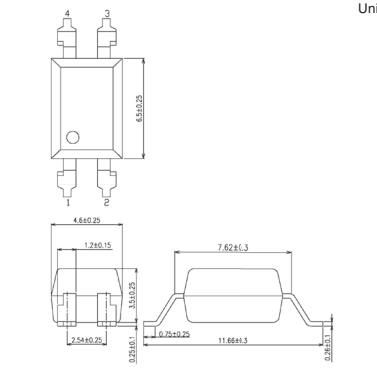
TLP785 DIP4(LF6) / (TP6)

Unit:mm



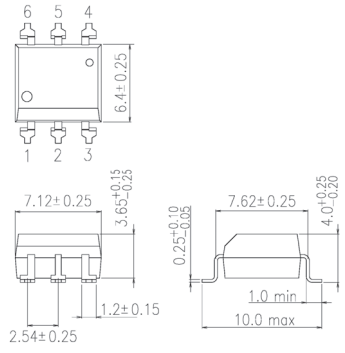
TLP785 DIP4(LF7) / (TP7)

Unit:mm



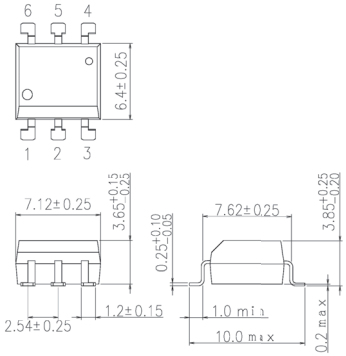
DIP6(LF1) / (TP1)

Unit:mm



DIP6(LF5) / (TP5)

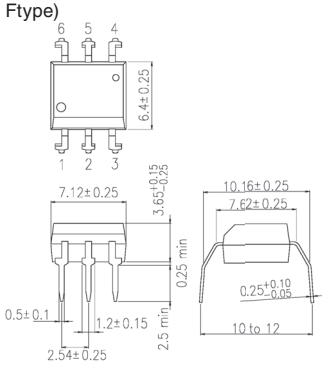
Unit:mm



DIP6(LF2)

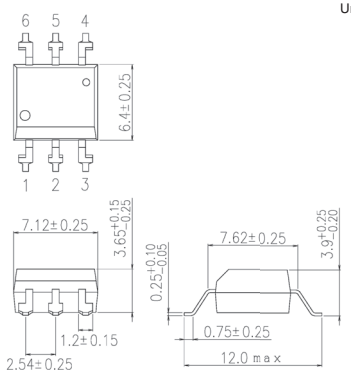
(DIP6 Ftype)

Unit:mm



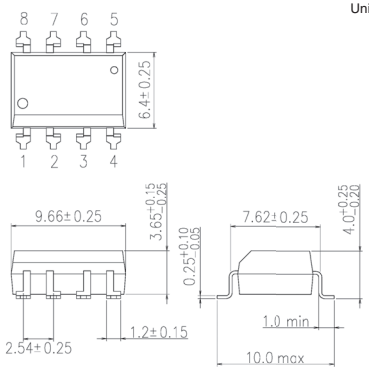
DIP6(LF4) / (TP4)

Unit:mm



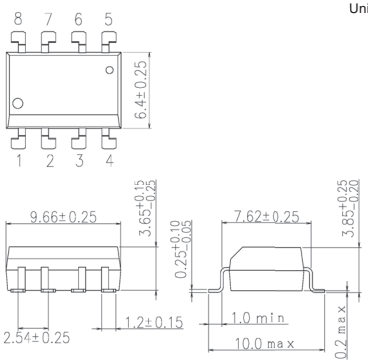
DIP8(LF1) / (TP1)

Unit:mm



DIP8(LF5) / (TP5)

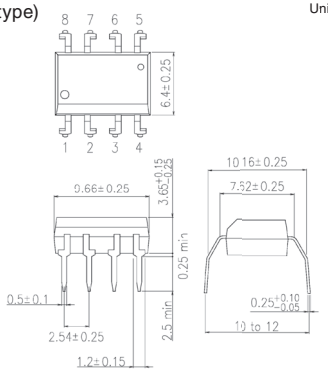
Unit:mm



DIP8(LF2)

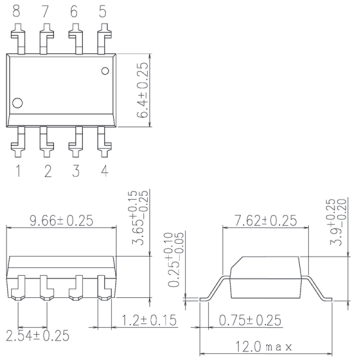
(DIP8 Ftype)

Unit:mm



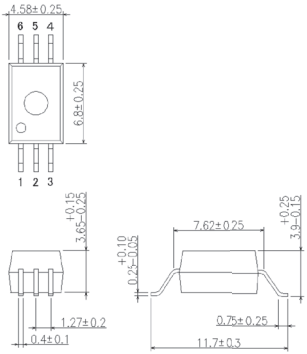
DIP8(LF4) / (TP4)

Unit:mm



SDIP6

Unit:mm



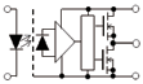
7. Cross Reference

Cross Reference for IGBT/MOSFET Driver Couplers

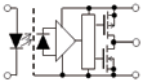
Part Number	Toshiba Replacement	Replacement Level **(Note:1)**	Peak Current	Output **(Note:2)**	Toshiba Package
ACNW3130	TLP352F	B	2.5 A	1	DIP8
ACNW3190	TLP358F	A	6.0 A	1	DIP8
ACPL-3130	TLP352	B	2.5 A	1	DIP8
ACPL-330J	TLP5214	B	4.0 A	3	SO16L
ACPL-331J	TLP5214	S	4.0 A	3	SO16L
ACPL-332J	TLP5214	S	4.0 A	3	SO16L
ACPL-333J	TLP5214	B	4.0 A	3	SO16L
ACPL-339J	TLP5214	B	4.0 A	3	SO16L
ACPL-H312	TLP5702	B	2.5 A	1	SO6L
ACPL-H342	TLP5752	B	2.5 A	1	SO6L
ACPL-J313	TLP352	B	2.5 A	1	DIP8
ACPL-K312	TLP5702	B	2.5 A	1	SO6L
ACPL-K342	TLP5752	B	2.5 A	2	SO6L
ACPL-P302	TLP5701	B	0.6 A	1	SO6L
ACPL-P314	TLP5701	B	0.6 A	1	SO6L
ACPL-P340	TLP5751	B	1.0 A	2	SO6L
ACPL-P341	TLP5752	B	2.5 A	2	SO6L
ACPL-P343	TLP5754	B	4.0 A	2	SO6L
ACPL-P347	TLP5751	B	1.0 A	2	SO6L
ACPL-P349	TLP5752	B	2.5 A	2	SO6L
ACPL-T350	TLP352	A	2.5 A	1	DIP8
ACPL-W302	TLP5701	B	0.6 A	1	SO6L
ACPL-W314	TLP5701	B	0.6 A	1	SO6L
ACPL-W340	TLP5751	B	1.0 A	2	SO6L
ACPL-W341	TLP5752	B	2.5 A	2	SO6L
ACPL-W343	TLP5754	B	4.0 A	2	SO6L
ACPL-W347	TLP5751	B	1.0 A	2	SO6L
ACPL-W349	TLP5752	B	2.5 A	2	SO6L
FOD3120	TLP5752	B	2.5 A	2	SO6L
FOD3150	TLP5751	B	1.0 A	2	SO6L
FOD3182	TLP5754	S	4.0 A	2	SO6L
FOD8314	TLP5702	S	2.5 A	1	SO6L
FOD8332	TLP5214	S	4.0 A	3	SO16L
HCNW3120	TLP352F	B	2.5 A	1	DIP8
HCPL-0302	TLP2451A	A	0.6 A	1	SO8
HCPL-0314	TLP2451A	A	0.6 A	1	SO8
HCPL-3020	TLP351H	A	0.6 A	1	DIP8
HCPL-3120	TLP352	B	2.5 A	1	DIP8
HCPL-3140	TLP351H	A	0.6 A	1	DIP8

Note:2

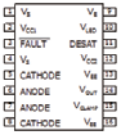
1: Totem pole



2: Totem pole (Rail to Rail)



3: Smart Gate Driver



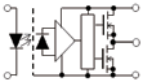
Note:1
S: Upper compatible (Advantage of space or package)
A: Direct compatible
B: Close equivalent

Part Number	Toshiba Replacement	Replacement Level **(Note:1)**	Peak Current	Output **(Note:2)**	Toshiba Package
HCPL-314J	TLP5701 x 2pcs	B	0.6 A	1	SO6L
HCPL-3150	TLP351H	B	0.6 A	1	DIP8
HCPL-315J	TLP5701 x 2pcs	B	0.6 A	1	SO6L
HCPL-316J	TLP5214	B	4.0 A	3	SO16L
HCPL-3180	TLP352	B	2.5 A	1	DIP8
HCPL-J312	TLP352	B	2.5 A	1	DIP8
HCPL-J314	TLP351H	B	0.6 A	1	DIP8
HCPL-T250	TLP352	B	2.5 A	1	DIP8
PS9301	TLP5701	B	0.6 A	1	SO6L
PS9302	TLP5702	B	2.5 A	1	SO6L
PS9307L	TLP5701	B	0.6 A	1	SO6L
PS9308L	TLP5702	B	2.5 A	1	SO6L
PS9331L	TLP5702	B	2.5 A	1	SO6L
PS9402	TLP5214	S	4.0 A	3	SO16L
PS9505	TLP352	B	2.5 A	1	DIP8
PS9506	TLP351H	A	0.6 A	1	DIP8
PS9531	TLP352	B	2.5 A	1	DIP8
PS9552	TLP350H	B	2.5 A	1	DIP8
PS9553	TLP351H	A	0.6 A	1	DIP8
PS9801	TLP2451A	A	0.6 A	1	SO8
PC923	TLP351A	A	0.6 A	1	DIP8
PC924	TLP351H	B	0.6 A	1	DIP8
PC925	TLP352	B	2.5A	1	DIP8
PC928	TLP5214	B	4.0 A	3	SO16L
PC929	TLP5214	B	4.0 A	3	SO16L

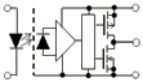
Note:1
S: Upper compatible (Advantage of space or package)
A: Direct compatible
B: Close equivalent

Note:2

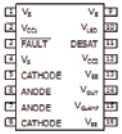
1: Totem pole



2: Totem pole (Rail to Rail)



3: Smart Gate Driver

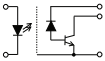


Cross Reference for High Speed and IPM Driver Couplers

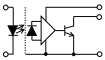
Part Number	Toshiba Replacement	Replacement Level **(Note:1)**	Data rate (Typ.)	Output **(Note:2)**	Toshiba Package
ACPL-071L	TLP2466	A	20 Mbps	4	SO8
ACPL-074L	TLP2160	A	20 Mbps	7	SO8
ACPL-M483	TLP2348	A	10 Mbps	4	5pin SO6
ACPL-M484	TLP2345	A	10 Mbps	5	5pin SO6
ACPL-M60L	TLP2368	A	20 Mbps	2	5pin SO6
ACPL-M61L	TLP2361	A	15 Mbps	4	5pin SO6
ACPL-M62L	TLP2368	B	20Mbps	2	5pin SO6
ACPL-M75L	TLP2366	A	20 Mbps	4	5pin SO6
ACPL-P454	TLP2704	B	1 Mbps	2	SO6L
ACPL-P456	TLP2704	B	1 Mbps	2	SO6L
ACPL-P480	TLP2710	B	5 Mbps	5	SO6L
ACPL-P481	TLP2710	B	5 Mbps	5	SO6L
ACPL-P611	TLP2768A	B	20 Mbps	2	SO6L
ACPL-W454	TLP2704	B	1 Mbps	2	SO6L
ACPL-W456	TLP2704	B	1 Mbps	2	SO6L
ACPL-W480	TLP2710	B	5 Mbps	5	SO6L
ACPL-W481	TLP2710	B	5 Mbps	5	SO6L
ACPL-W60L	TLP2768A	B	20 Mbps	2	SO6L
ACPL-W611	TLP2768A	B	20 Mbps	2	SO6L
ACPL-W70L	TLP2770	B	20 Mbps	5	SO6L
HCPL-0201	TLP2405	A	5 Mbps	3	SO8
HCPL-0211	TLP2405	A	5 Mbps	3	SO8
HCPL-0452	TLP2409	A	1 Mbps	1	SO8
HCPL-0453	TLP2409	A	1 Mbps	1	SO8
HCPL-0454	TLP2404	B	1 Mbps	2	SO8
HCPL-0466	TLP2404	B	1 Mbps	2	SO8
HCPL-0500	TLP2409	B	1 Mbps	1	SO8
HCPL-0501	TLP2409	B	1 Mbps	1	SO8
HCPL-0600	TLP2468	B	20 Mbps	2	SO8
HCPL-0601	TLP2468	B	20 Mbps	2	SO8
HCPL-060L	TLP2468	B	20 Mbps	2	SO8
HCPL-0611	TLP2468	B	20 Mbps	2	SO8
HCPL-061A	TLP2468	B	20 Mbps	2	SO8
HCPL-061N	TLP2468	B	20 Mbps	2	SO8
HCPL-0630	TLP2261	B	15 Mbps	7	SO8L
HCPL-0631	TLP2261	B	15 Mbps	7	SO8L
HCPL-063A	TLP2261	B	15 Mbps	7	SO8L
HCPL-063L	TLP2261	B	15 Mbps	7	SO8L
HCPL-063N	TLP2261	B	15 Mbps	7	SO8L
HCPL-0661	TLP2261	B	15 Mbps	7	SO8L
HCPL-0700	TLP2403	B	100 kbps	1	SO8
HCPL-0701	TLP2403	B	100 kbps	1	SO8
HCPL-0708	TLP2466	A	20 Mbps	4	SO8
HCPL-070A	TLP2403	B	100 kbps	1	SO8
HCPL-070L	TLP2403	B	100 kbps	1	SO8
HCPL-0738	TLP2168	B	20 Mbps	6	SO8
HCPL-2200	TLP2955	B	5 Mbps	3	DIP8
HCPL-2201	TLP2955	A	5 Mbps	3	DIP8
HCPL-2202	TLP2955	B	5 Mbps	3	DIP8
HCPL-2211	TLP2955	B	5 Mbps	3	DIP8
HCPL-2212	TLP2955	B	5 Mbps	3	DIP8
HCPL-2219	TLP2955	B	5 Mbps	3	DIP8
HCPL-2231	TLP2105	B	5 Mbps	8	SO8
HCPL-2232	TLP2105	B	5 Mbps	8	SO8
HCPL-2601	TLPN137	B	10 Mbps	2	DIP8
HCPL-2611	TLPN137	B	10 Mbps	2	DIP8
HCPL-2630	TLP2662	A	10 Mbps	6	DIP8

Note:2

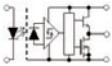
1: Open collector
(Analog output - 1ch)



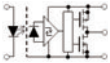
2: Open collector
(Digital output - 1ch)



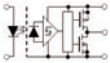
3: Totem pole (1ch)



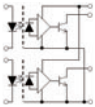
4: Totem pole (1ch)



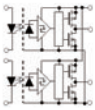
5: Totem pole (1ch)



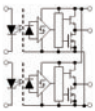
6: Open collector
(Digital output - Dual)



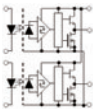
7: Totem pole (Dual)



8: Totem pole (Dual)



9: Totem pole (Dual)

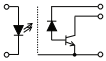


Note:1
S: Upper compatible (Advantage of space or package)
A: Direct compatible
B: Close equivalent

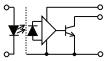
Part Number	Toshiba Replacement	Replacement Level **(Note:1)**	Data rate (Typ.)	Output **(Note:2)**	Toshiba Package
HCPL-2631	TLP2662	A	10 Mbps	6	DIP8
HCPL-4502	TLP759	A	1 Mbps	1	DIP8
HCPL-4503	TLP759	A	1 Mbps	1	DIP8
HCPL-4504	TLP759	B	1 Mbps	1	DIP8
HCPL-4506	TLP754	B	1 Mbps	2	DIP8
HCPL-4661	TLP2662	A	10 Mbps	6	DIP8
HCPL-M452	TLP2309	A	1 Mbps	1	5pin SO6
HCPL-M453	TLP2309	A	1 Mbps	1	5pin SO6
HCPL-M454	TLP2309	A	1 Mbps	1	5pin SO6
HCPL-M456	TLP104	A	1 Mbps	2	5pin SO6
HCPL-M600	TLP2362	A	10 Mbps	2	5pin SO6
HCPL-M601	TLP2362	A	10 Mbps	2	5pin SO6
HCPL-M611	TLP2362	A	10 Mbps	2	5pin SO6
PS8101	TLP2309	A	1 Mbps	1	5pin SO6
PS8302L	TLP2704	B	2 Mbps	2	SO6L
PS8501	TLP759	B	1 Mbps	1	DIP8
PS8502	TLP759	A	1 Mbps	1	DIP8
PS8601	TLP759	B	1 Mbps	1	DIP8
PS8602	TLP759	A	1 Mbps	1	DIP8
PS8701	TLP2309	A	1 Mbps	1	5pin SO6
PS8802-1	TLP2409	A	1 Mbps	1	SO8
PS8802-2	TLP2108	B	5 Mbps	9	SO8
PS8821	TLP2409	A	1 Mbps	1	SO8
PS9113	TLP104	A	1 Mbps	2	5pin SO6
PS9115	TLP2361	S	15 Mbps	4	5pin SO6
PS9117A	TLP2361	S	15 Mbps	4	5pin SO6
PS9121	TLP2368	S	20 Mbps	2	5pin SO6
PS9122	TLP2362	S	10 Mbps	2	5pin SO6
PS9123	TLP2366	S	20 Mbps	4	5pin SO6
PS9124	TLP2362	S	10 Mbps	2	5pin SO6
PS9151	TLP2366	S	20 Mbps	4	5pin SO6
PS9213	TLP104	A	1 Mbps	2	5pin SO6
PS9214	TLP2362	A	10 Mbps	2	5pin SO6
PS9303	TLP2710	B	5 Mbps	5	SO6L
PS9313L	TLP2704	B	2 Mbps	2	SO6L
PS9317L	TLP2768A	B	20 Mbps	2	SO6L
PS9324L	TLP2768A	B	20 Mbps	2	SO6L
PS9351L	TLP2761	B	15 Mbps	4	SO6L
PS9513	TLP754	S	1 Mbps	2	DIP8
PS9587	TLP2962	A	10 Mbps	2	DIP8
PS9617	TLP2962	A	10 Mbps	2	DIP8
PS9817A-1	TLP2468	S	20 Mbps	2	SO8
PS9817A-2	TLP2168	S	20 Mbps	6	SO8
PS9821-1	TLP2468	S	20 Mbps	2	SO8
PS9821-2	TLP2168	S	20 Mbps	6	SO8
PS9822-1	TLP2404	S	2 Mbps	2	SO8
PS9822-2	TLP2168	S	20 Mbps	6	SO8
PS9851-1	TLP2466	S	20 Mbps	4	SO8
PS9851-2	TLP2160	S	20 Mbps	7	SO8
PC400T	TLP2303	B	100kbps	2	5pin SO6
PC410L	TLP2362	S	10 Mbps	2	5pin SO6
PC410S	TLP2468	S	20 Mbps	2	SO8
PC411S	TLP2466	S	20 Mbps	4	SO8
PC456L	TLP104	S	1 Mbps	2	5pin SO6
PC457L	TLP2309	A	1 Mbps	1	5pin SO6
PC457S	TLP2409	A	1 Mbps	1	SO8
PC4D10	TLP2168	A	20 Mbps	6	SO8

Note:2

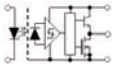
1: Open collector
(Analog output - 1ch)



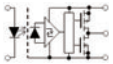
2: Open collector
(Digital output - 1ch)



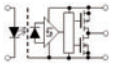
3: Totem pole (1ch)



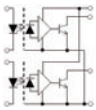
4: Totem pole (1ch)



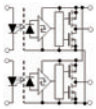
5: Totem pole (1ch)



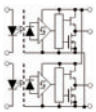
6: Open collector
(Digital output - Dual)



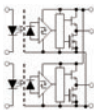
7: Totem pole (Dual)



8: Totem pole (Dual)



9: Totem pole (Dual)



Note:1
S: Upper compatible (Advantage of space or package)
A: Direct compatible
B: Close equivalent

Cross Reference for Isolation Amplifiers/Delta-Sigma Modulators

Part Number	Toshiba Replacement	Replacement Level **(Note:1)**	Input feature	Output feature	Toshiba Package
HCPL-7800	TLP7920	A	differential	Analog, Differential	DIP8
HCPL-7800A	TLP7920	A	differential	Analog, Differential	DIP8
HCPL-7840	TLP7920	A	differential	Analog, Differential	DIP8
ACPL-C790	TLP7820	A	differential	Analog, Differential	SO8L
ACPL-C79A	TLP7820	A	differential	Analog, Differential	SO8L
ACPL-C79B	TLP7820	A	differential	Analog, Differential	SO8L
ACPL-7900	TLP7920	A	differential	Analog, Differential	DIP8
ACPL-790A	TLP7920	A	differential	Analog, Differential	DIP8
ACPL-790B	TLP7920	A	differential	Analog, Differential	DIP8
ACPL-C784	TLP7820	A	differential	Analog, Differential	SO8L
ACPL-C780	TLP7820	A	differential	Analog, Differential	SO8L
ACPL-C78A	TLP7820	A	differential	Analog, Differential	SO8L
ACPL-C870	TLP7820	B	differential	Analog, Differential	SO8L
ACPL-C87A	TLP7820	B	differential	Analog, Differential	SO8L
ACPL-C87B	TLP7820	B	differential	Analog, Differential	SO8L
HCPL-7860	TLP7930	A	differential	Digital,Internal CLK	DIP8
HCPL-786J	TLP7830	B	differential	Digital,Internal CLK	SO8L
ACPL-C797	TLP7830	A	differential	Digital,Internal CLK	SO8L
ACPL-7970	TLP7930	A	differential	Digital,Internal CLK	DIP8
ACPL-796J	TLP7830	B	differential	Digital,Internal CLK	SO8L
ACPL-798J	TLP7830	B	differential	Digital,Internal CLK	SO8L
AMC1100DWV	TLP7820	A	differential	Analog, Differential	SO8L
AMC1100DUB	TLP7920	A	differential	Analog, Differential	DIP8
AMC1200BDWV	TLP7820	A	differential	Analog, Differential	SO8L
AMC1200BDUB	TLP7920	A	differential	Analog, Differential	DIP8
AMC1203PSA	TLP7830	B	differential	Digital,Internal CLK	SO8L
AMC1203DUB	TLP7930	A	differential	Digital,Internal CLK	DIP8
AMC1203DW	TLP7830	B	differential	Digital,Internal CLK	SO8L
AMC1203BPSA	TLP7830	B	differential	Digital,Internal CLK	SO8L
AMC1203BDUB	TLP7930	A	differential	Digital,Internal CLK	DIP8
AMC1203BDW	TLP7830	B	differential	Digital,Internal CLK	SO8L
AMC1204DW	TLP7830	B	differential	Digital,Internal CLK	SO8L
AMC1204BDWV	TLP7830	B	differential	Digital,Internal CLK	SO8L
AMC1204BDW	TLP7830	B	differential	Digital,Internal CLK	SO8L
AMC1304	TLP7830	B	differential	Digital,Internal CLK	SO8L
AMC1305	TLP7830	B	differential	Digital,Internal CLK	SO8L
AD7400A	TLP7830	B	differential	Digital,Internal CLK	SO8L
AD7401A	TLP7830	B	differential	Digital,Internal CLK	SO8L
AD7402	TLP7830	B	differential	Digital,Internal CLK	SO8L
AD7403	TLP7830	B	differential	Digital,Internal CLK	SO8L
AD7405	TLP7830	B	differential	Digital,Internal CLK	SO8L
PS8551A	TLP7920	A	differential	Analog, Differential	DIP8
PS9551A	TLP7930	A	differential	Digital,Internal CLK	DIP8

Note1:
S: Upper compatible (Advantage of space or package)
A: Direct compatible
B: Close equivalent

Cross Reference for Photorelays (1-Form-A)

Part Number	Toshiba Recommend	Replacement Level **(Note:1)**	OFF-state output terminal voltage	ON-state current	Toshiba Package
AQV201	TLP241A	B	40 V	2 A	DIP4
AQV202	TLP240A	B	60 V	0.5 A	DIP4
AQV204	TLP240GA	B	400 V	0.12 A	DIP4
AQV210EH	TLP240GA	B	400 V	0.12 A	DIP4
AQV210S	TLP197G	A	350 V	0.12 A	2.54SOP6
AQV212	TLP240A	B	60 V	0.5 A	DIP4
AQV212S	TLP197A	B	60 V	0.4 A	2.54SOP6
AQV214	TLP240GA	B	400 V	0.12 A	DIP4
AQV214E	TLP240GA	B	400 V	0.12 A	DIP4
AQV214EH	TLP240GA	B	400 V	0.12 A	DIP4
AQV214H	TLP240GA	B	400 V	0.12 A	DIP4
AQV214S	TLP197GA	B	350 V	0.12 A	2.54SOP6
AQV215	TLP3546	S	100 V	2 A	DIP6
AQV215S	TLP3105	S	100 V	1.4 A	2.54SOP6
AQV216	TLP240J	B	600 V	0.09 A	DIP4
AQV217S	TLP240D	B	200 V	0.2 A	DIP4
AQV227NS	TLP199D	A	200 V	0.2 A	2.54SOP6
AQV251G	TLP3544	S	40 V	3.5 A	DIP6
AQV252	TLP240A	B	60 V	0.5 A	DIP4
AQV252G	TLP3545	S	60 V	3 A	DIP6
AQV252G2S	TLP3107	S	60 V	3.3 A	2.54SOP6
AQV254	TLP240GA	B	400 V	0.12 A	DIP4
AQV254H	TLP240GA	B	400 V	0.12 A	DIP4
AQV255	TLP3546	S	100 V	2 A	DIP6
AQV255GS	TLP3105	S	100 V	1.4 A	2.54SOP6
AQY210LS	TLP174G	A	350 V	0.12 A	2.54SOP4
AQY210S	TLP172AM	B	60 V	0.5 A	4pin SO6
AQY211EH	TLP241A	S	40 V	2 A	DIP4
AQY212GS	TLP3122	A	60 V	1 A	2.54SOP4
AQY212S	TLP172GM	B	350 V	0.12 A	4pin SO6
AQY214EH	TLP240GA	A	400 V	0.12 A	DIP4
AQY214S	TLP176GA	A	400 V	0.12 A	2.54SOP4
AQY216EH	TLP240J	S	600 V	0.09 A	DIP4
AQY221N2S	TLP3216	B	40 V	0.12 A	SSOP4
AQY221N2VW	TLP3216	A	40 V	0.12 A	SSOP4
AQY221R2S	TLP3215	B	40 V	0.3 A	SSOP4
AQY221R2VW	TLP3214	A	40 V	0.25 A	SSOP4
AQY221R6T	TLP3406S	B	20 V	0.8 A	S-VSON4
AQY222R2VW	TLP3212	A	60 V	0.4 A	SSOP4
AQY225R1S	TLP3121	A	80 V	0.35 A	2.54SOP4
AQY225R2S	TLP3419	B	80 V	0.2 A	VSON4
AQY225R2VW	TLP3217	A	80 V	0.12 A	SSOP4
AQY234S	TLP171GA	A	400 V	0.1 A	2.54SOP4
CPC1330	TLP240GA	A	400 V	0.12 A	DIP4
CPC1393	TLP240J	A	600 V	0.09 A	DIP4
LCA100	TLP240GA	B	400 V	0.12 A	DIP4
PS7113-1A	TLP3546	S	100 V	2 A	DIP6
PS7141E-1A	TLP240GA	B	400 V	0.12 A	DIP4
PS7160-1A	TLP240J	B	600 V	0.09 A	DIP4
PS7206-1A	TLP3122	S	60 V	1 A	2.54SOP4
PS7241E-1A	TLP176GA	A	400 V	0.12 A	2.54SOP4
PS7341-1A	TLP240GA	B	400 V	0.12 A	DIP4
PS7360-1A	TLP240J	B	600 V	0.09 A	DIP4
PS7804-1A	TLP3212	A	60 V	0.4 A	SSOP4

Note1:
S: Upper compatible (Advantage of space or package)
A: Direct compatible
B: Close equivalent

Cross Reference for Photorelays (2-Form-A)

Part Number	Toshiba Recommend	Replacement Level **(Note:1)**	OFF-state output terminal voltage	ON-state current	Toshiba Package
AQW210	TLP222G-2	A	350 V	0.12 A	DIP8
AQW210EH	TLP240GA x 2pcs	B	400 V	0.12 A	DIP4
AQW210HL	TLP224G-2	A	350 V	0.12 A	DIP8
AQW210S	TLP206G	A	350 V	0.12 A	2.54SOP8
AQW212	TLP222A-2	A	60 V	0.5 A	DIP8
AQW212EH	TLP240A x 2pcs	B	60 V	0.5 A	DIP4
AQW212S	TLP202A	A	60 V	0.4 A	2.54SOP8
AQW214	TLP227GA-2	A	400 V	0.12 A	DIP8
AQW214EH	TLP240GA x 2pcs	B	400 V	0.12 A	DIP4
AQW214S	TLP206GA	A	400 V	0.12 A	2.54SOP8
AQW215	TLP240D x 2pcs	B	200 V	0.25 A	DIP4
AQW216	TLP240J x 2pcs	B	600 V	0.09 A	DIP4
AQW216EH	TLP240J x 2pcs	B	600 V	0.09 A	DIP4
AQW217	TLP240D x 2pcs	B	200 V	0.25 A	DIP4
AQW223R2S	TLP222G-2	B	350 V	0.12 A	DIP8
AQW224N	TLP227GA-2	A	400 V	0.12 A	DIP8
AQW227N	TLP240D x 2pcs	B	200 V	0.25 A	DIP4
AQW227NS	TLP209D	A	200 V	0.05 A	2.54SOP8
AQW254	TLP227GA-2	A	400 V	0.12 A	DIP8
CPC2014N	TLP202A	B	60 V	0.4 A	2.54SOP8
CPC2017N	TLP202A	B	60 V	0.4 A	2.54SOP8
CPC2025N	TLP206GA	B	400 V	0.12 A	2.54SOP8
CPC2030N	TLP206G	B	350 V	0.12 A	2.54SOP8
PS7241-2A	TLP206GA	A	400 V	0.12 A	2.54SOP8

Note1:
A: Direct compatible
B: Close equivalent

Cross Reference for Photorelays (Form-B, 2-Form-B,Form-A/Form-B)

Part Number	Toshiba Recommend	Replacement Level **(Note:1)**	OFF-state output terminal voltage	ON-state current	Toshiba Package
AQV410EH	TLP4597G	B	350 V	0.15 A	DIP6
AQV414	TLP4597G	B	350 V	0.15 A	DIP6
AQV414E	TLP4597G	B	350 V	0.15 A	DIP6
AQV414S	TLP4197G	B	350 V	0.12 A	2.54SOP6
AQV454	TLP4597G	B	350 V	0.15 A	DIP6
AQV454H	TLP4597G	B	350 V	0.15 A	DIP6
AQY410EH	TLP4227G	B	350 V	0.15 A	DIP4
AQY410S	TLP4176G	A	350 V	0.12 A	2.54SOP4
AQY414EH	TLP4227G	B	350 V	0.15 A	DIP4
AQY414S	TLP4176G	B	350 V	0.12 A	2.54SOP4
AQW414	TLP4227G-2	B	350 V	0.15 A	DIP8
AQW414EH	TLP4227G-2	B	350 V	0.15 A	DIP8
AQW414S	TLP4206G	B	350 V	0.12 A	2.54SOP8
AQW454	TLP4227G-2	B	350 V	0.15 A	DIP8
AQW610EH	TLP4006G	A	350 V	0.12 A	DIP8
AQW610S	TLP4026G	B	350 V	0.12 A	2.54SOP8
AQW614	TLP4006G	B	350 V	0.12 A	DIP8
AQW614EH	TLP4006G	B	350 V	0.12 A	DIP8
AQW654	TLP4006G	B	350 V	0.12 A	DIP8
CPC1125N	TLP4176G	B	350 V	0.12 A	2.54SOP4
CPC1130N	TLP4176G	A	350 V	0.12 A	2.54SOP4
CPC1135N	TLP4176G	A	350 V	0.12 A	2.54SOP4
CPC1150N	TLP4176G	A	350 V	0.12 A	2.54SOP4
CPC1231N	TLP4176G	A	350 V	0.12 A	2.54SOP4
CPC1333	TLP4227G	A	350 V	0.15 A	DIP4
CPC2125N	TLP4206G	B	350 V	0.12 A	2.54SOP8
LBB110	TLP4227G-2	A	350 V	0.15 A	DIP8
LCB110	TLP4597G	A	350 V	0.15 A	DIP6
LCB111	TLP4597G	A	350 V	0.15 A	DIP6
PBB190	TLP4227G-2	B	350 V	0.15 A	DIP8
PLB190	TLP4597G	B	350 V	0.15 A	DIP6
XBB170	TLP4227G-2	A	350 V	0.15 A	DIP8
XCB170	TLP4597G	A	350 V	0.15 A	DIP6

Note1:
A: Direct compatible
B: Close equivalent

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