



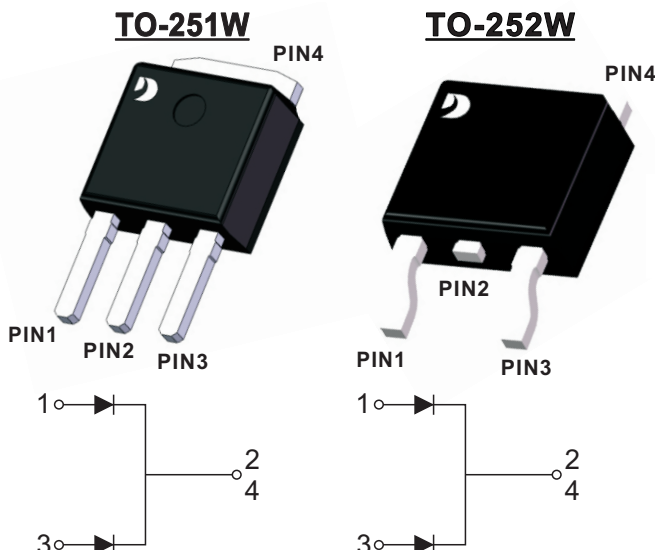
Schottky Barrier Rectifiers
Reverse Voltage - 40 to 200 V
Forward Current - 20 A

Features

- High current capability
- Low forward voltage drop
- Low power loss, high efficiency
- High surge capability
- High temperature soldering guaranteed
- Mounting position: any

Mechanical data

- Case: TO-251W
- Approx. Weight: 0.342g (0.012oz)
- Case: TO-252W
- Approx. Weight: 0.329g (0.011oz)
- Lead free finish, RoHS compliant
- Case Material: "Green" molding compound, UL flammability classification 94V-0, "Halogen-free".



Maximum Ratings And Electrical Characteristics

Ratings At 25°C Ambient Temperature Unless Otherwise Specified

Parameter	TO-251W	MBR2040VT	MBR2045VT	MBR2060VT	MBR20100VT	MBR20150VT	MBR20200VT	Units
	TO-252W	MBR2040DT	MBR2045DT	MBR2060DT	MBR20100DT	MBR20150DT	MBR20200DT	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	40	45	60	100	150	200	V
Maximum RMS voltage	V_{RMS}	28	32	42	70	105	140	V
Maximum DC Blocking Voltage	V_{DC}	40	45	60	100	150	200	V
Maximum Average Forward Rectified Current Per leg Per device	$I_{F(AV)}$	10 20						A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)(Per leg)	I_{FSM}	130						A
Max Instantaneous Forward Voltage at 10 A DC per leg	V_F	0.70	0.75	0.85	0.90	0.92		V
Maximum DC Reverse Current $T_J = 25^\circ\text{C}$ at Rated DC Reverse Voltage $T_J = 125^\circ\text{C}$	I_R	0.1 20	0.05 20					mA
Typical Junction Capacitance ⁽¹⁾	C_j	600	400					pF
Typical Thermal Resistance ⁽²⁾	$R_{\theta JA}$	35						°C/W
Operating Junction Temperature Range	T_j	-55 ~ +150				-55 ~ +175		°C
Storage Temperature Range	T_{stg}	-55 ~ +150				-55 ~ +175		°C

(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

(2) P.C.B. mounted with 10cmX10cmX1mm copper pad areas.



Fig.1 Typical Forward Current Derating Curve

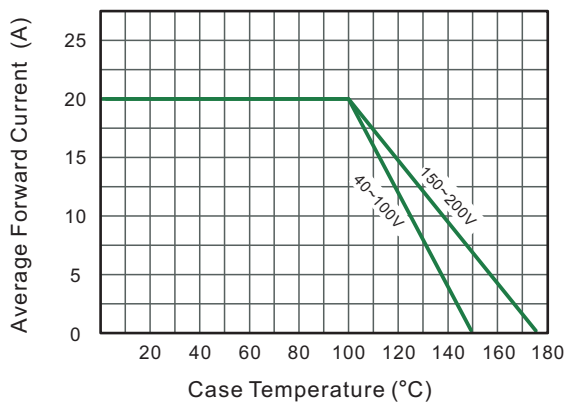


Fig.2 Typical Reverse Characteristics

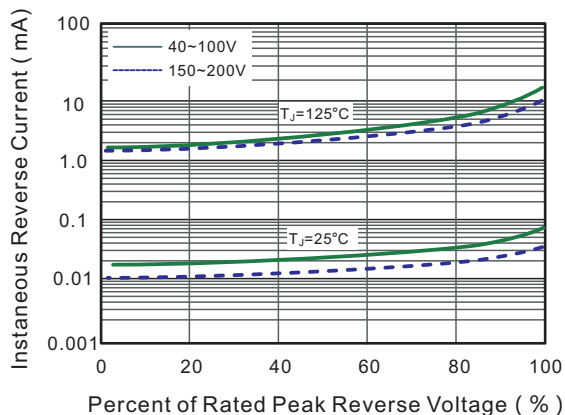


Fig.3 Typical Forward Characteristics

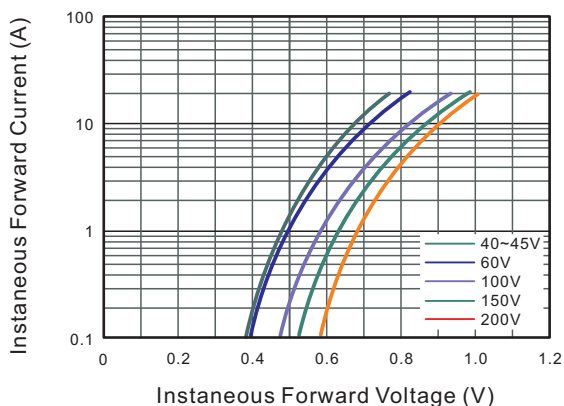


Fig.4 Typical Junction Capacitance

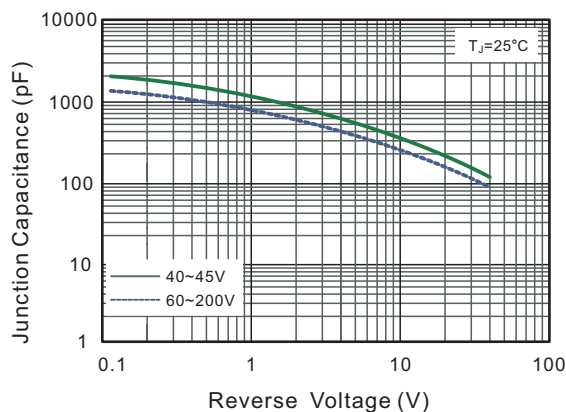


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

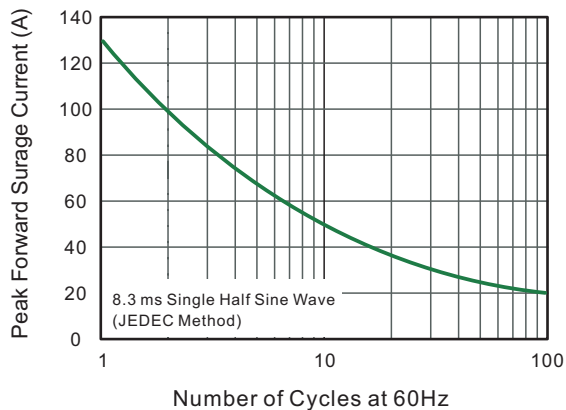
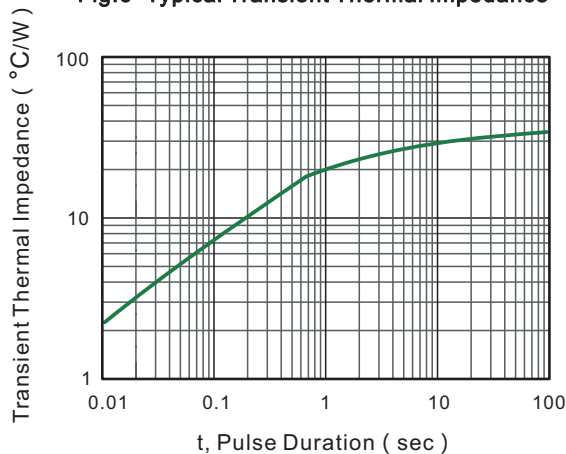
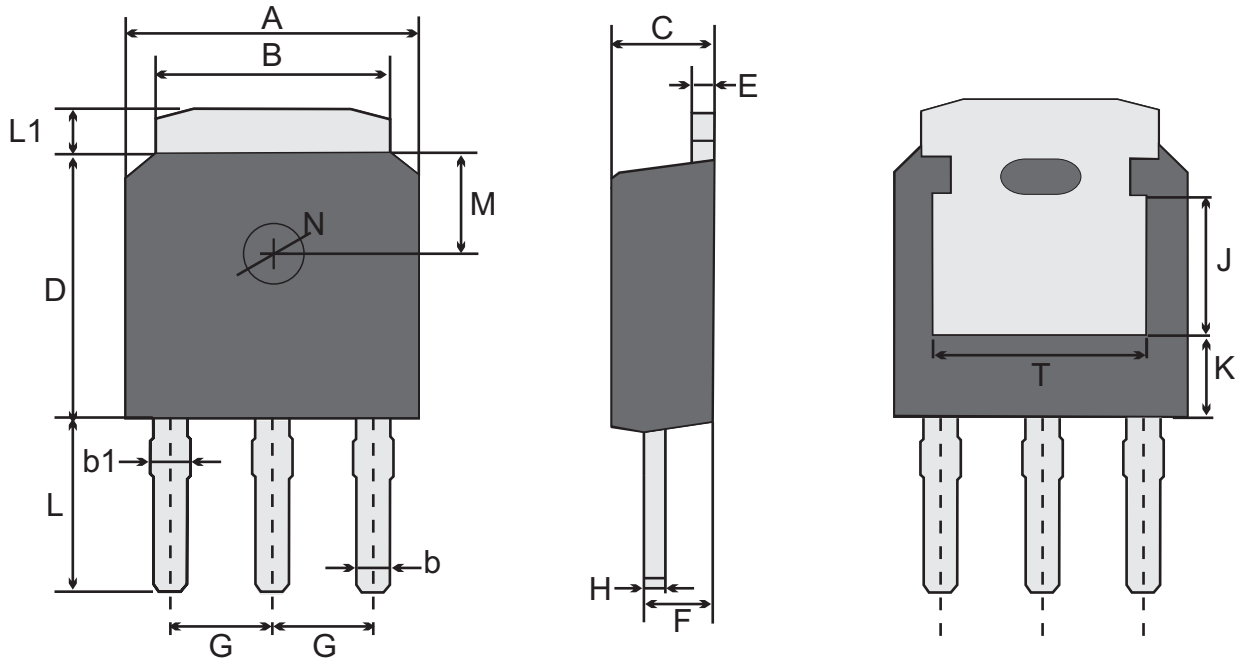


Fig.6- Typical Transient Thermal Impedance





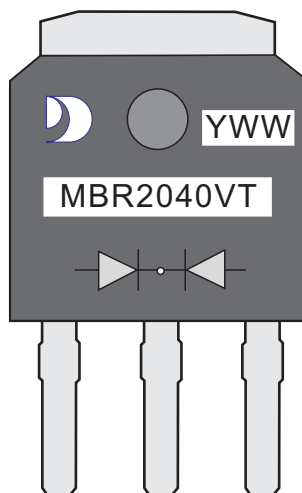
TO-251W(I-PAK) Package Outline Dimensions



TO-251W(I-PAK) mechanical data

UNIT		A	B	b	b1	C	D	E	F	G	H	L	L1	M	N	J	T	K
mm	max	6.7	5.53	0.86	1.11	2.5	6.3	0.61	1.72	2.3 typ.	0.56	4.3	1.2	1.8 typ.	1.3 typ.	3.2 ref.	4.83 ref.	1.8 ref.
	typ	6.6	5.33	0.76	0.91	2.3	6.1	0.51	1.52		0.51	4.1	1.0					
	min	6.3	5.13	0.66	0.71	2.1	5.9	0.41	1.32		0.46	3.9	0.8					
mil	max	264	218	34	44	98	248	24	68	91 typ.	22	169	47	71 typ.	51 typ.	126 ref.	190 ref.	71 ref.
	typ	260	210	30	36	91	240	20	60		20	161	39					
	min	248	202	26	28	83	232	16	52		18	154	31					

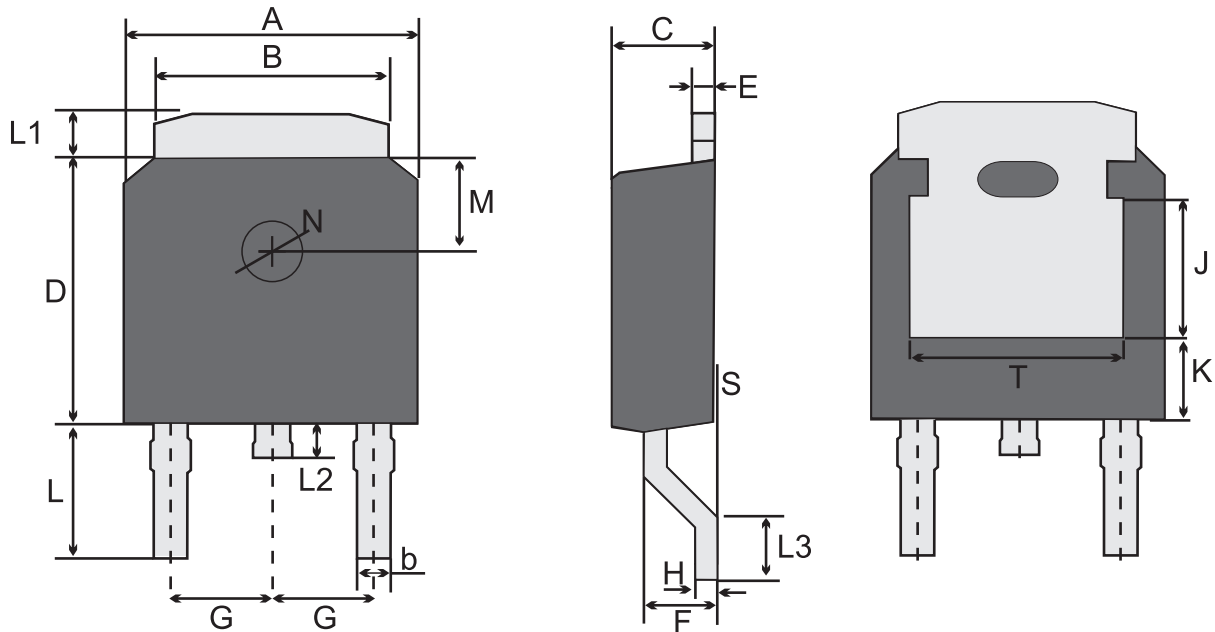
Marking Diagram



YWW: Date Code
 Y:Years(0~9)
 WW:Week
 MBR2040VT: Product name
 (NOTE: The weekly code is based on the actual number of weeks in the calendar year.)



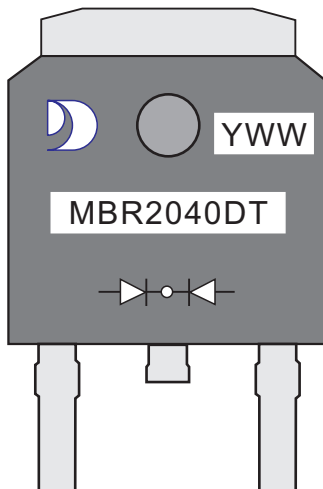
TO-252W(D-PAK) Package Outline Dimensions



TO-252W(D-PAK) Mechanical data

UNIT		A	B	b	C	D	E	F	G	H	L	L1	L2	L3	S	M	N	J	T	K
mm	max	6.7	5.53	0.86	2.5	6.3	0.61	1.87	2.3 typ.	0.55	3.0	1.2	1.0	1.75	0.23	1.8 typ.	1.3 typ.	3.2 ref.	4.83 ref.	1.8 ref.
	typ	6.6	5.33	0.76	2.3	6.1	0.51	1.57		0.50	2.8	1.0	0.8	1.30	0.15					
	min	6.3	5.13	0.66	2.1	5.9	0.41	1.27		0.45	2.6	0.8	0.6	1.0	/					
mil	max	264	218	34	98	248	24	74	91 typ.	22	118	47	39	69	9.1	71 typ.	51 typ.	126 ref.	190 ref.	71 ref.
	typ	260	210	30	91	240	20	62		20	110	39	31	51	5.9					
	min	248	202	26	83	232	16	50		18	102	31	24	39	/					

Marking Diagram



YWW: Date Code
 Y:Years(0~9)
 WW:Week
 MBR2040DT: Product name
 (NOTE:The weekly code is based on the actual number of weeks in the calendar year.)



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