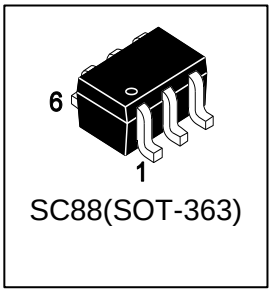
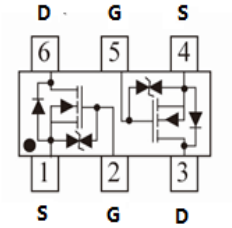
LBSS260DW1T1G
S-LBSS260DW1T1G

N-Channel 60-V Power Mosfet



1. FEATURES

- High speed switch
- ESD protected
- We declare that the material of product compliance with RoHS requirements and Halogen Free.
- S- prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.



2. APPLICATION

- Portable appliances
- Load switch appliances

3. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
LBSS260DW1T1G	J3	3000/Tape&Reel
LBSS260DW1T3G	J3	10000/Tape&Reel

4. MAXIMUM RATINGS(Ta = 25ºC)

Parameter	Symbol	Limits	Unit
Drain–Source Voltage	VDSS	60	Vdc
Gate–to–Source Voltage – Continuous	VGS	±20	Vdc
Drain Current			mAdc
– Continuous TA = 25°C	ID	200	
– Pulsed (tp≤10μs)	IDM	800	

5. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Total Device Dissipation,	PD	380	mW
FR−4 Board (Note 1) @ TA = 25ºC			
Derate above 25ºC		3.05	mW/ºC
Thermal Resistance,	RΘJA	328	ºC/W
Junction–to–Ambient(Note 1)			
Junction and Storage temperature	TJ,Tstg	−55~+150	° C
Maximum Lead Temperature for Solde	TL	260	ºC
Purposes, for 10 seconds			

1. FR–4 = 1.0×0.75×0.062 in.

6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

OFF CHARACTERISTICS

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Drain–Source Breakdown Voltage (VGS = 0, ID = 250μAdc)	VBRDSS	60	-	-	Vdc
Zero Gate Voltage Drain Current (VGS = 0, VDS = 55 Vdc)	IDSS	-	-	0.1	μAdc
Gate–Body Leakage Current, Forward (VGS=20V, VDS=0V)	IGSSF	-	-	5	μAdc
Gate–Body Leakage Current, Reverse (VGS= -20V, VDS=0V)	IGSSR	-	-	-5	μAdc

ON CHARACTERISTICS (Note 2)

Gate Threshold Voltage (VDS=VGS,IDS=250μA)	VGS(th)	0.5	-	1.0	Vdc
Static Drain–Source On–State Resistance	RDS(on)				Ohms
(VGS=10V,IDS=0.5A)		-	-	1.44	
(VGS=4.5V,ID=0.1A)		-	-	2	
(VGS=2.5V, IDS=0.05A)		-	-	2.5	
(VGS=1.8V, IDS=0.01A)		-	-	3	
Diode Forward Voltage (ISD = 0.5 A, VGS = 0 V)	VSD	0.5	-	1.35	Vdc

DYNAMIC CHARACTERISTICS

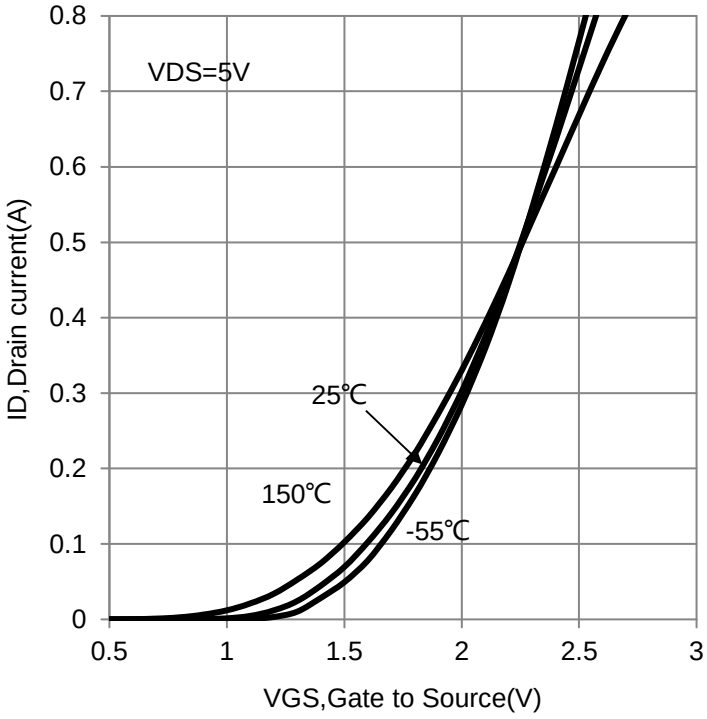
Input Capacitance (VDS = 25 Vdc, VGS = 0, f = 1.0 MHz)	Ciss	-	22.8	-	pF
Output Capacitance (VDS = 25 Vdc, VGS = 0, f = 1.0 MHz)	Coss	-	3.5	-	pF
Reverse Transfer Capacitance (VDS = 25 Vdc, VGS = 0, f = 1.0 MHz)	Crss	-	2.9	-	pF

SWITCHING CHARACTERISTICS

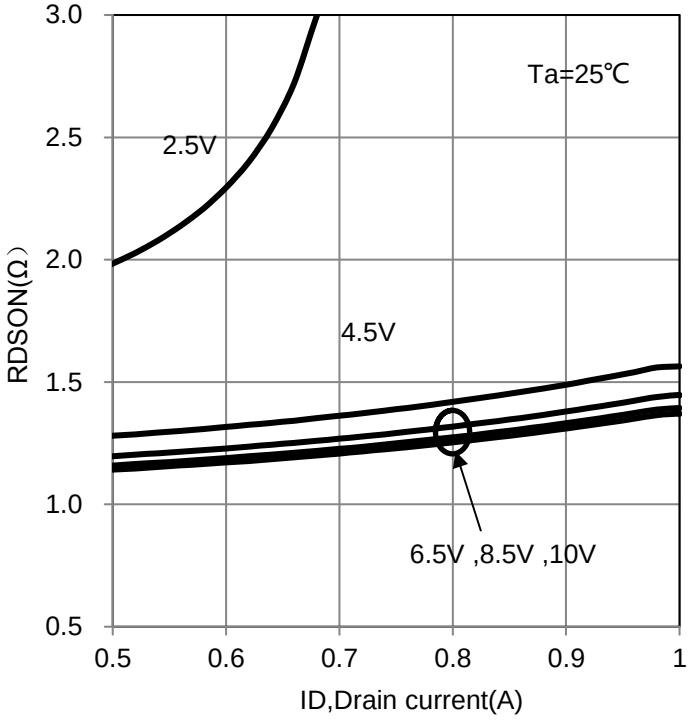
Turn-On Delay Time	(VDD = 30 Vdc , VGEN = 10 V,RG =25Ω ,RL =60 Ω,ID =500 mAdc)	td(on)	-	3.8	-	ns
Turn-Off Delay Time		td(off)	-	19	-	

2.Pulse Test: Pulse Width ≤300 μs, Duty Cycle ≤2.0%.

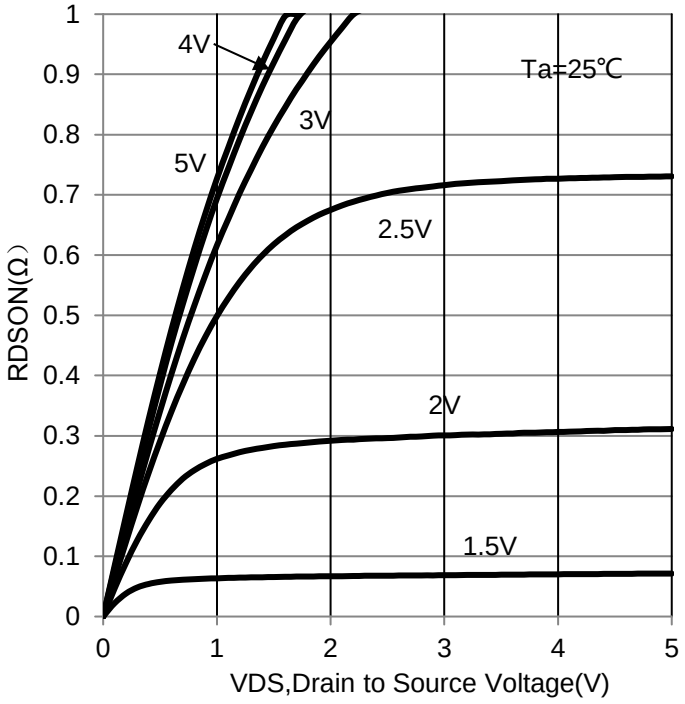
7. ELECTRICAL CHARACTERISTICS CURVES



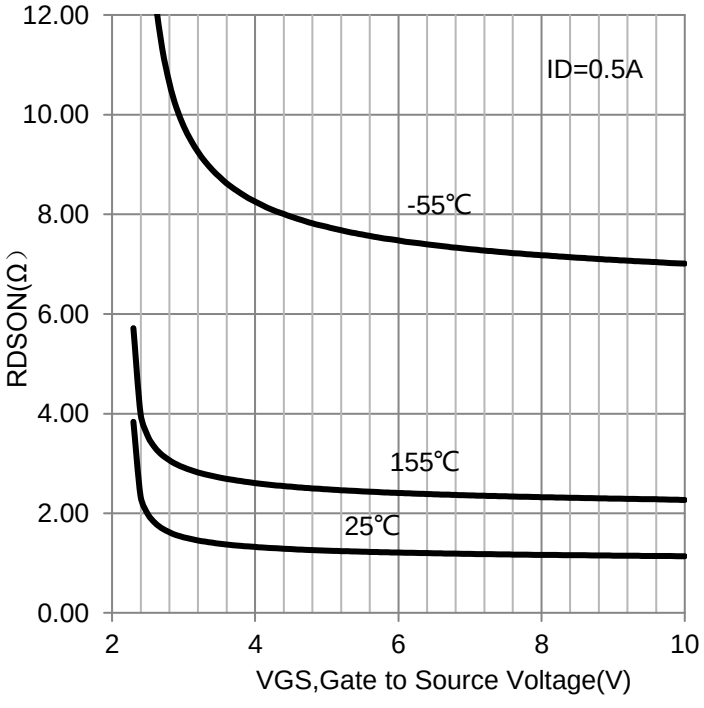
ID vs. VGS



RDSON vs. ID

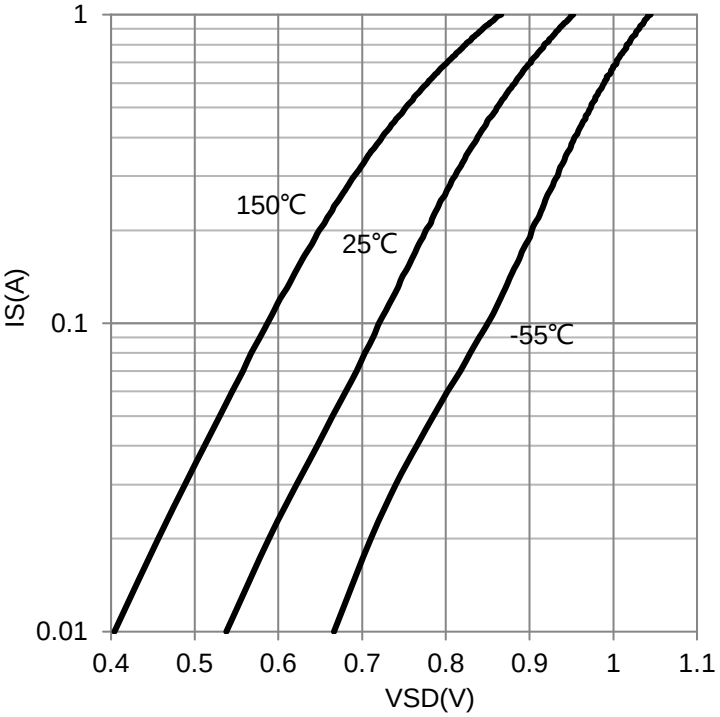


RDSON vs. VDS

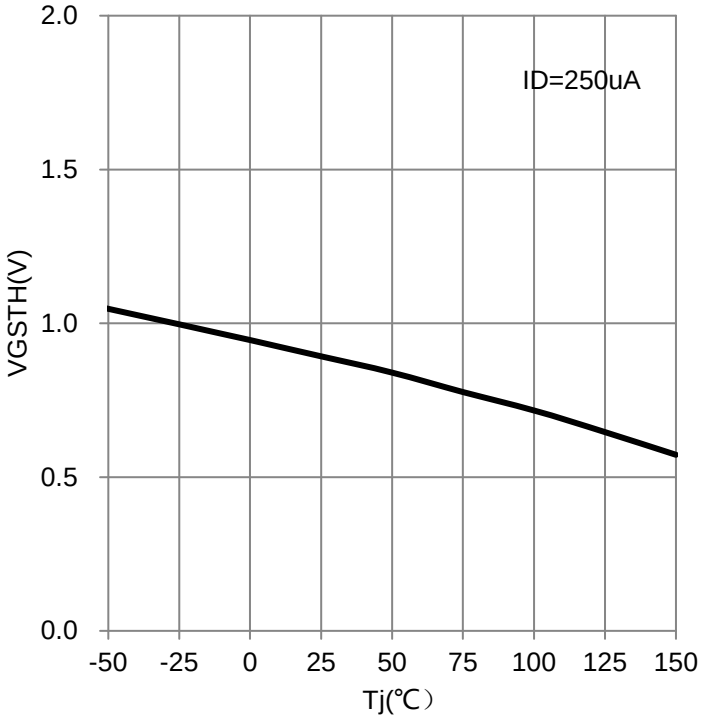


RDSON vs. VGS

7. ELECTRICAL CHARACTERISTICS CURVES(Con.)

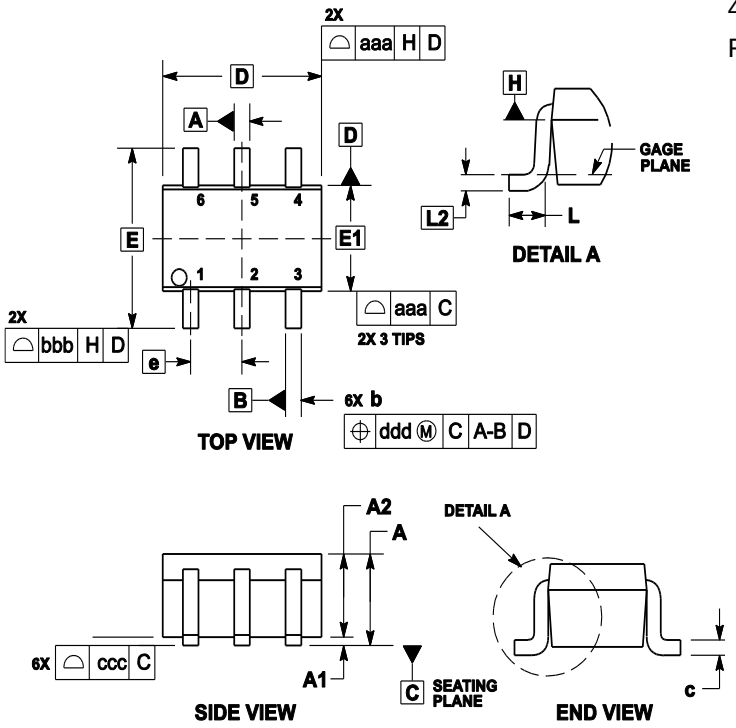


IS vs. VSD



VGSTH vs. TJ

8.OUTLINE AND DIMENSIONS



Notes:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.

	MILLIMETERS			INCHES		
DIM	MIN	NOM	MAX	MIN	NOM	MAX
A	---	---	1.10	---	---	0.043
A1	0.00	---	0.10	0	---	0.004
A2	0.70	0.90	1.00	0.027	0.035	0.039
b	0.15	0.20	0.25	0.006	0.008	0.01
C	0.08	0.15	0.22	0.003	0.006	0.009
D	1.80	2.00	2.20	0.07	0.078	0.086
E	2.00	2.10	2.20	0.078	0.082	0.086
E1	1.15	1.25	1.35	0.045	0.049	0.053
e	0.65 BSC			0.026 BSC		
L	0.26	0.36	0.46	0.010	0.014	0.018
L2	0.15 BSC			0.006 BSC		
aaa	0.15			0.01		
bbb	0.30			0.01		
ccc	0.10			0.00		
ddd	0.10			0.00		

9.SOLDERING FOOTPRINT