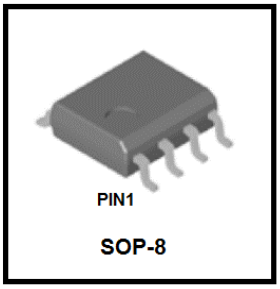
LN4264T1G

N-Channel 60-V (D-S) MOSFET

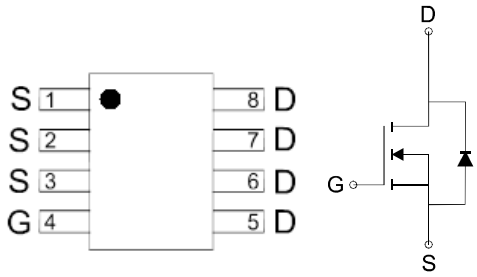


1. FEATURES

- Low RDS(on) trench technology.
- Low thermal impedance.
- Fast switching speed.
- We declare that the material of product are Halogen Free and compliance with RoHS requirements.

2. APPLICATION

- DC/DC Conversion
- Motor Drives



3. ORDERING INFORMATION

Device	Marking	Shipping
LN4264T1G	LN4264	4000/Tape&Reel

4. MAXIMUM RATINGS(Ta = 25ºC unless otherwise stated)

Parameter		Symbol	Limits	Unit
Drain−to−Source Voltage		VDSS	60	V
Gate−to−Source Voltage		VGS	±20	V
Continuous Drain Current(Note 1)	TA =25°C	ID	15	A
	TA =70°C		13	
Pulsed Drain Current (Note 2)		IDM	60	
Continuous Source Current (Diode Conduction)(Note 1)		IS	4.6	A
Power Dissipation(Note 1)	TA =25°C	PD	3.1	W
	TA =70°C		2.2	
Operating Junction Temperature		TJ	−55 ~+150	℃
Storage Temperature Range		Tstg	−55 ~+150	

1.Surface Mounted on 1” x 1” FR4 Board.

2.Pulse width limited by maximum junction temperature.

5. THERMAL CHARACTERISTICS

Parameter		Symbol	Limits	Unit
Maximum Junction-to-Ambient(Note 1)	t≤10s	RθJA	40	℃/W
	Steady State		80	
Maximum Junction-to-Case	Steady State	RθJC	26	

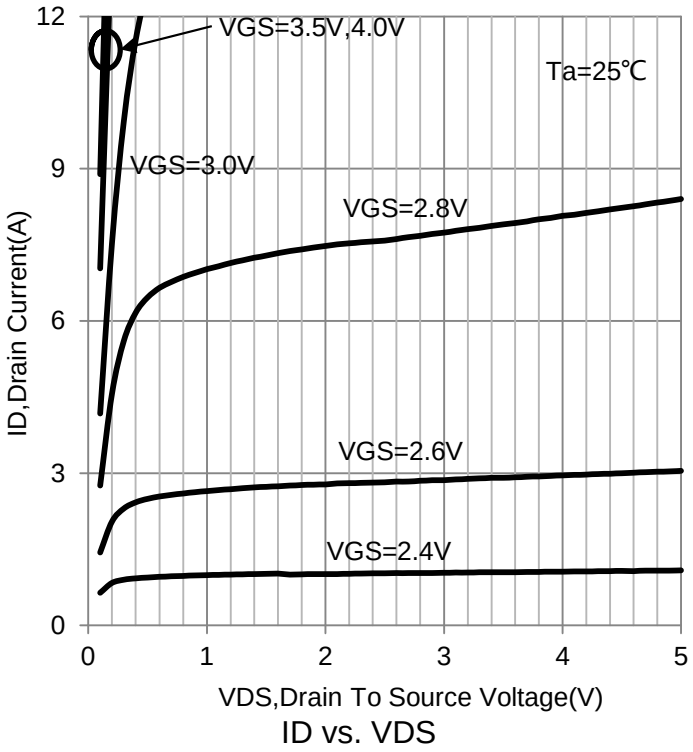
6. ELECTRICAL CHARACTERISTICS

Characteristic		Symbol	Min.	Typ.	Max.	Unit
Static						
Gate-Source Threshold Voltage (VDS = VGS , ID = 250 uA)		VGS(th)	1	1.7	2.5	V
Gate-Body Leakage (VDS = 0 V, VGS = ±20 V)		IGSS	-	-	±100	nA
Zero Gate Voltage Drain Current (VDS = 48 V, VGS = 0 V) (VDS = 48 V, VGS = 0 V, TJ = 55°C)		IDSS	- -	- -	1 10	μA
On-State Drain Current(Note 3) (VDS = 5 V, VGS = 10 V)		ID(on)	23	-	-	A
Drain-Source On-Resistance(Note 3) (VGS = 10 V, ID = 10 A) (VGS = 4.5 V, ID = 8 A)		RDS(on)	- -	7.2 9.2	8.9 10.5	mΩ
Forward Transconductance(Note 3) (VDS = 15 V, ID = 10 A)		gfs	-	53	-	S
Diode Forward Voltage(Note 3) (IS = 2.3 A, VGS = 0 V)		VSD	-	0.74	-	V
Dynamic(Note 4)						
Total Gate Charge	(VDS = 30 V, VGS = 4.5 V,ID = 10 A)	Qg	-	32	-	nC
Gate-Source Charge		Qgs	-	9.2	-	
Gate-Drain Charge		Qgd	-	9.6	-	
Turn-On Delay Time	(VDS = 30 V, RL = 3Ω ,ID = 10 A,VGEN = 10 V, RGEN = 6Ω)	td(on)	-	11	-	ns
Rise Time		tr	-	10	-	
Turn-Off Delay Time		td(off)	-	111	-	
Fall Time		tf	-	31	-	
Input Capacitance	(VDS = 15 V, VGS = 0 V, f = 1 MHz)	Ciss	-	4107	-	pF
Output Capacitance		Coss	-	222	-	
Reverse Transfer Capacitance		Crss	-	179	-	

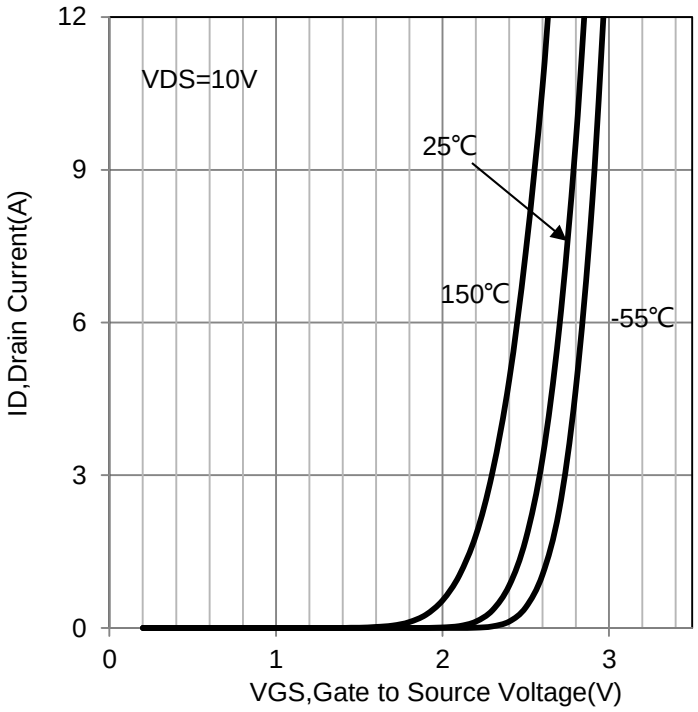
3.Pulse test: PW≤ 300μs duty cycle ≤ 2%.

4.Guaranteed by design, not subject to production testing.

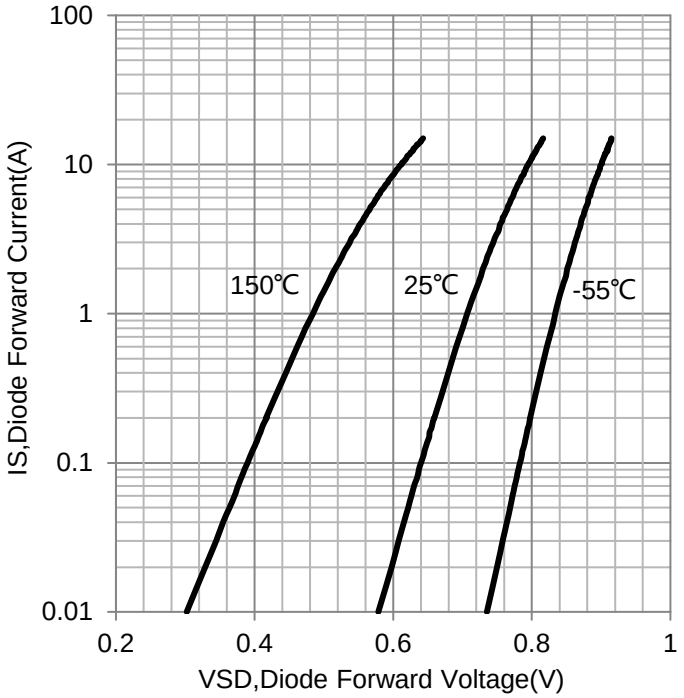
7. ELECTRICAL CHARACTERISTICS CURVES



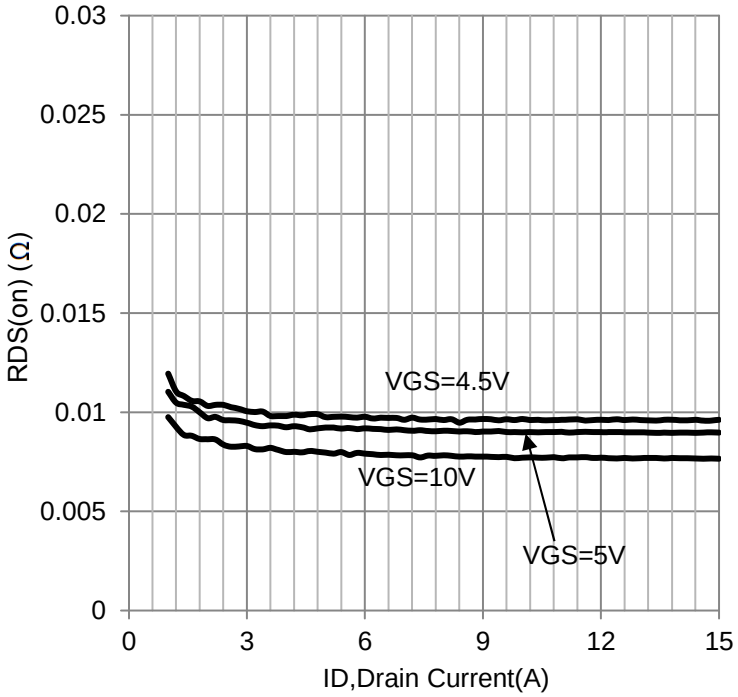
ID vs. VDS



ID vs. VGS

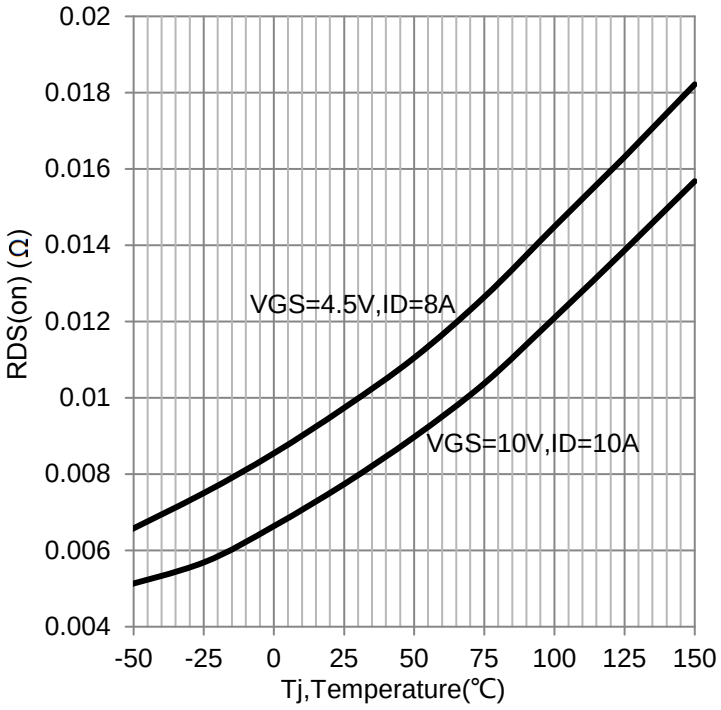


IS vs. VSD

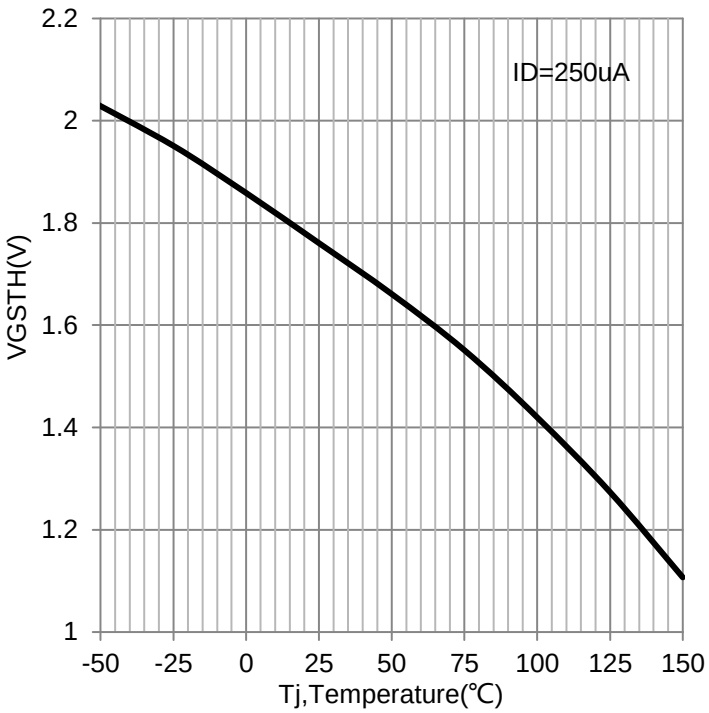


RDS(on) vs. ID

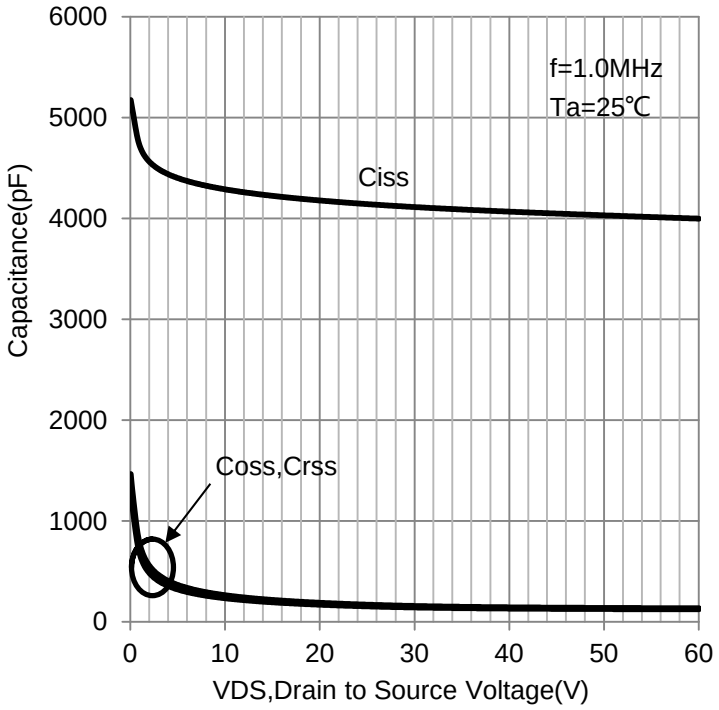
7. ELECTRICAL CHARACTERISTICS CURVES(Con.)



RDS(on) vs. Tj



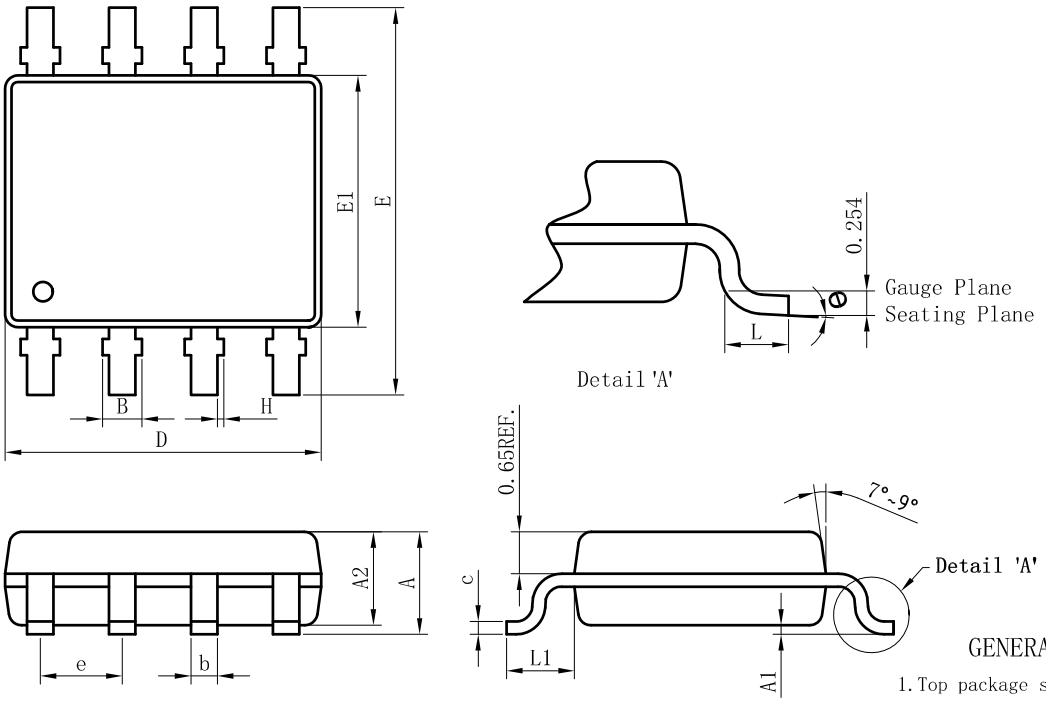
VGSTH vs. Tj



Capacitance

OUTLINE AND DIMENSIONS

SOP8

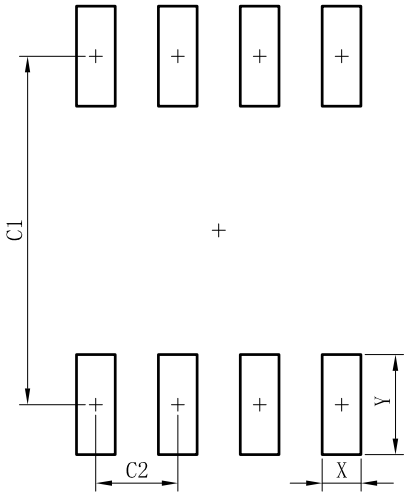


SOP8			
DIM	MIN	NOR	MAX
A	–	–	1.75
A1	0.10	0.15	0.20
A2	1.35	1.45	1.55
b	0.33	0.42	0.51
c	0.15	0.22	0.29
D	4.77	4.90	5.03
E	5.80	6.00	6.20
E1	3.80	3.90	4.00
e	1.27BSC		
L	0.46	0.66	0.86
L1	0.85	1.05	1.25
θ	0°	5°	8°
B	–	–	0.55
H	0	0.05	0.10
All Dimensions in mm			

GENERAL NOTES

1. Top package surface finish Ra0.4±0.2um
2. Bottom package surface finish Ra0.7±0.2um
3. Side package surface finish Ra0.4±0.2um
4. Package Body Sizes Exclude Mold Flash, Protrusion Or Gate Burrs. Mold Flash, Protrusion Or Gate Burrs Shall Not Exceed 0.10 mm Per Side.
5. Dimension "b" Does Not Include Dambar Protrusion.

SOLDERING FOOTPRINT



SOP8	
DIM	(mm)
X	0.60
Y	1.55
C1	5.40
C2	1.27