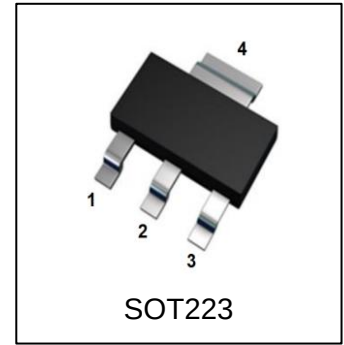


LP27N100TZHG

100V P-Channel Power MOSFET

1. FEATURES

- Low thermal impedance.
- Fast switching speed.
- We declare that the material of product compliance with RoHS requirements and Halogen Free.

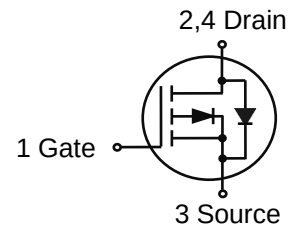


2. APPLICATIONS

- Power Routing
- DC/DC Conversion
- Motor Drives

3. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
LP27N100TZHG	TG	1000/Tape&Reel



4. MAXIMUM RATINGS(Ta = 25°C)

Parameter	Symbol	Limits	Unit
Drain-Source Voltage	VDS	-100	V
Gate-Source Voltage	VGS	±20	
Continuous Drain Current (Note 1)	ID	-2	A
Pulsed Drain Current (Note 2)	IDM	-8	
Avalanche Current (L = 0.1mH)	IAS	7	A
Avalanche Energy (L = 0.1mH)	EAS	2.45	mJ
Power Dissipation (Note 1)	PD	2.3	W
Operating Junction and Storage Temperature Range	TJ , Tstg	-55~+150	°C

5. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Thermal Resistance,Junction-to-Ambient(Note 1)	RθJA	55	°C/W
Thermal Resistance,Junction-to-Case	RθJC	15	°C/W

1."1.5 x 1.5" FR4 board using 1 sq in pad, 2 oz Cu.

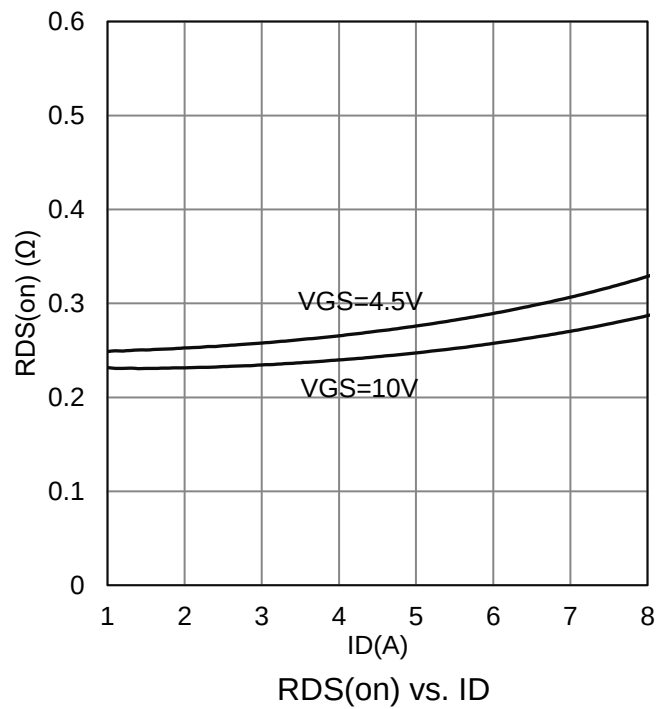
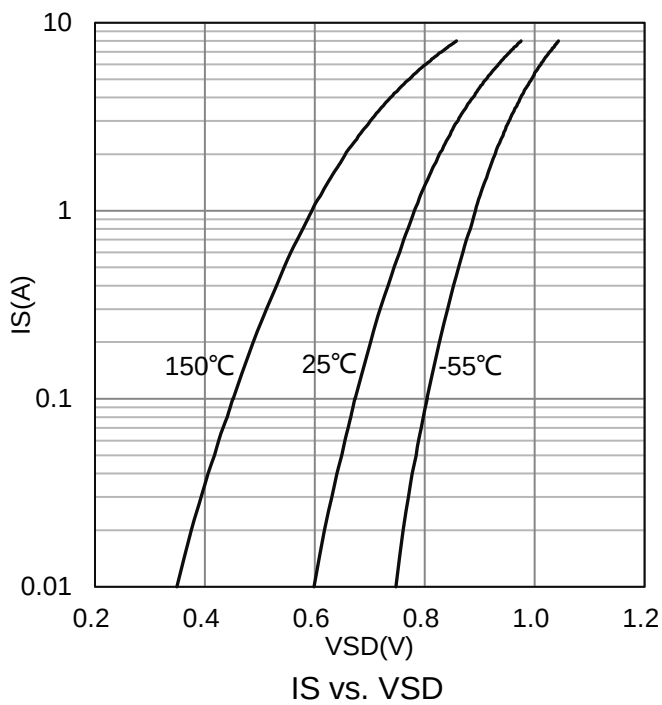
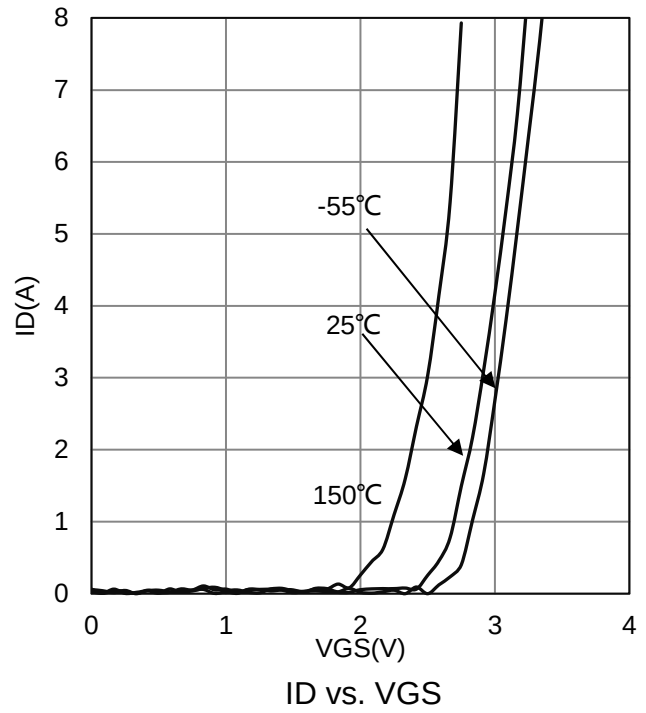
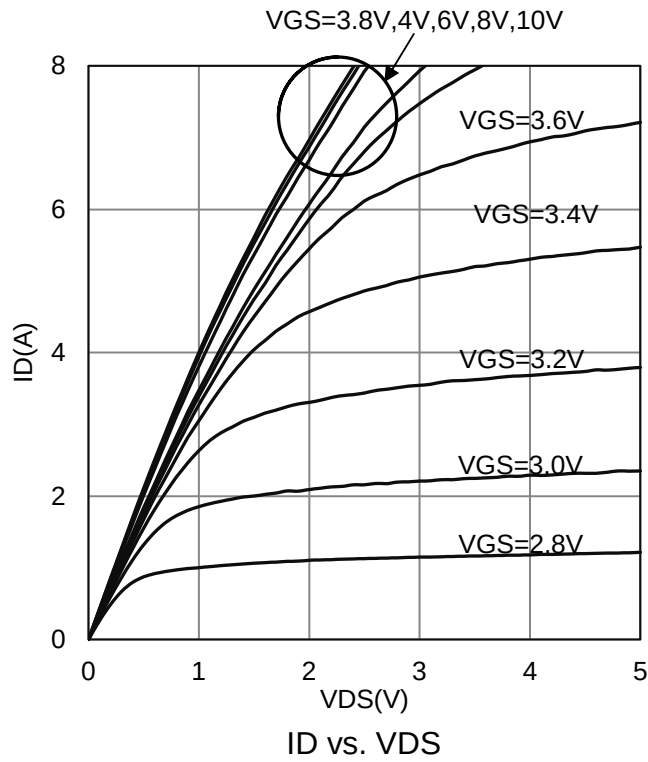
2.Pulse width limited by maximum junction temperature.

6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

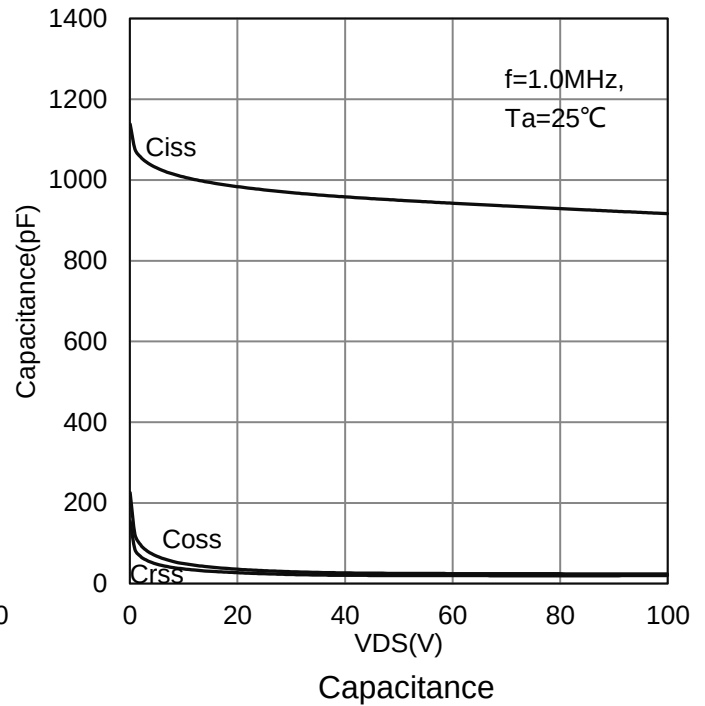
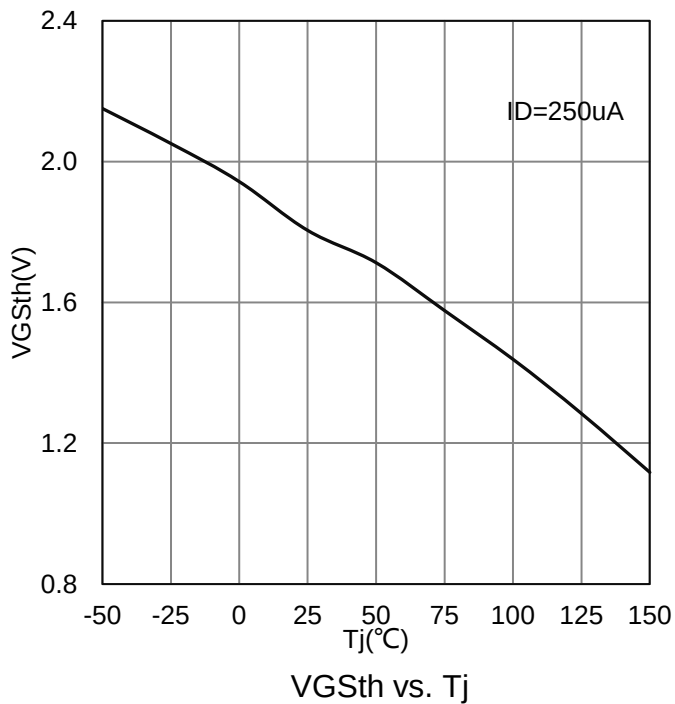
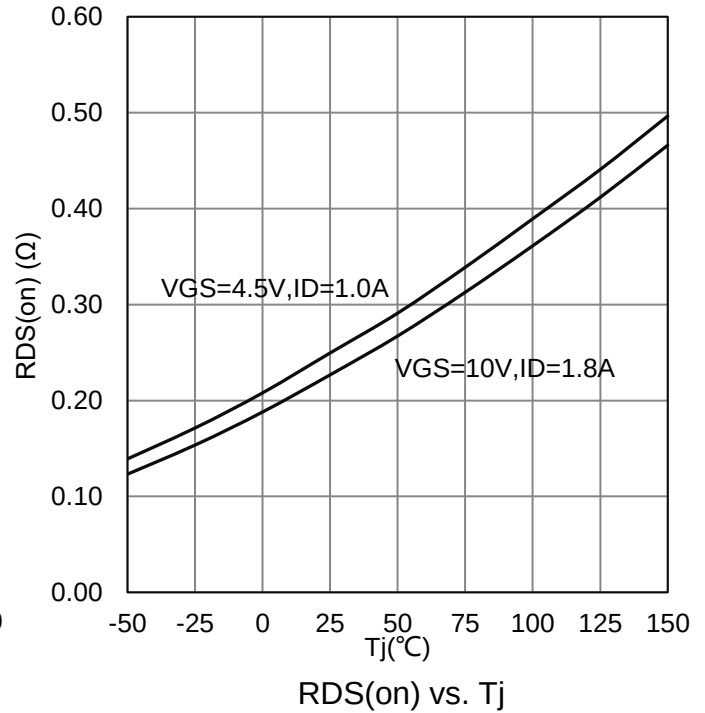
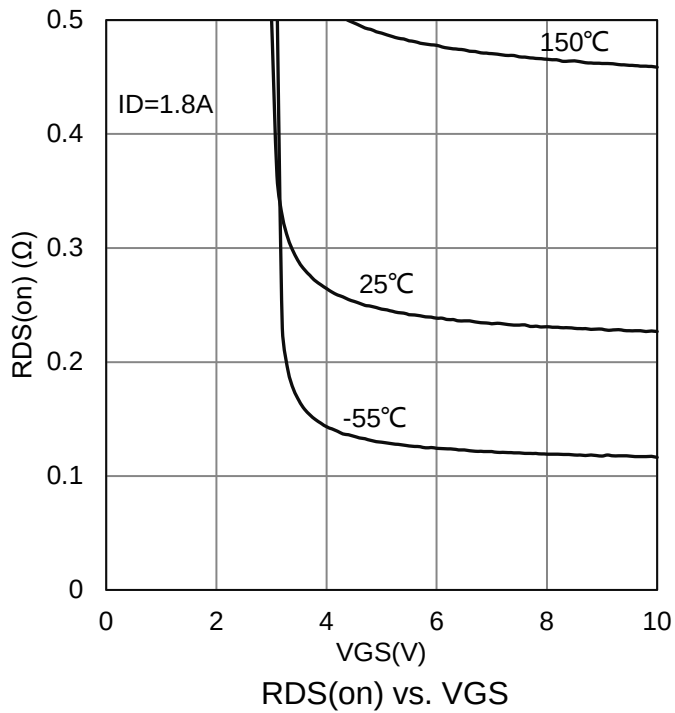
Characteristic	Symbol	Min.	Typ.	Max.	Unit
STATIC					
Drain–Source Breakdown Voltage (VGS = 0 V, ID = -250 μA)	VBRDSS	-100	-	-	V
Gate Threshold Voltage (VDS = VGS, ID = -250 μA)	VGS(th)	-1.1	-	-3	V
Gate-Body leakage current (VDS = 0 V, VGS = ±20 V)	IGSS	-	-	±100	nA
Zero Gate Voltage Drain Current (VDS = -80 V, VGS = 0 V)	IDSS	-	-	-1	μA
Drain-to-Source On-Resistance (Note 3) (VGS = -10 V, ID = -1.8 A) (VGS = -4.5 V, ID = -1 A)	RDS(on)	- -	- -	270 340	mΩ
Diode Forward Voltage (IS = -1 A, VGS = 0 V)	VSD	-	-	-1.2	V
DYNAMIC					
Input Capacitance	(VGS = 0 V, VDS = -50 V, f= 1MHz)	Ciss	-	950	pF
Output Capacitance		Coss	-	25.5	
Reverse Transfer Capacitance		Crss	-	20.5	
Total Gate Charge	(VDS = -50 V, VGS = -10 V, ID = -1 A)	Qg	-	16	nC
Gate Source Charge		Qgs	-	2.5	
Gate Drain Charge		Qgd	-	4	
Turn-On DelayTime	(VDS = -50 V, RL = 5 Ω, ID = -10 A, VGEN = -10 V, RGEN = 6 Ω)	td(on)	-	6.5	ns
Turn-On Rise Time		tr	-	11.5	
Turn-Off DelayTime		td(off)	-	47	
Turn-Off Fall Time		tf	-	21	

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

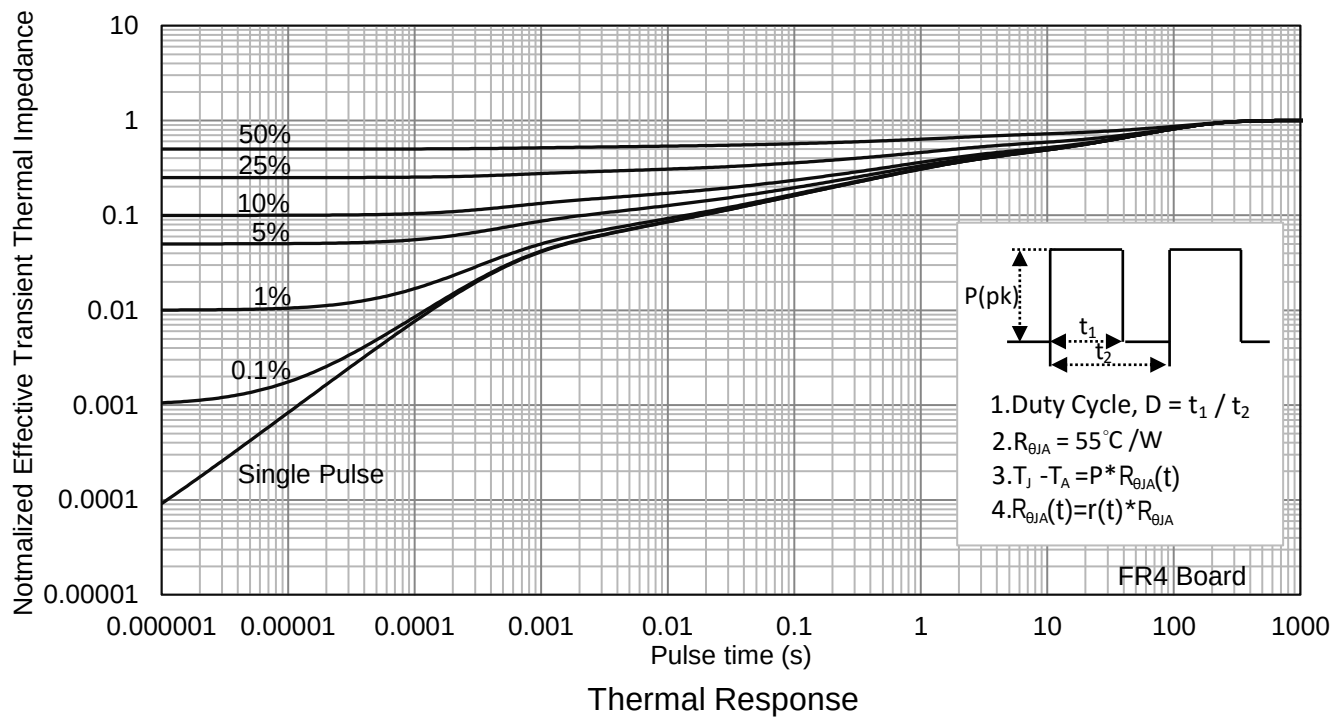
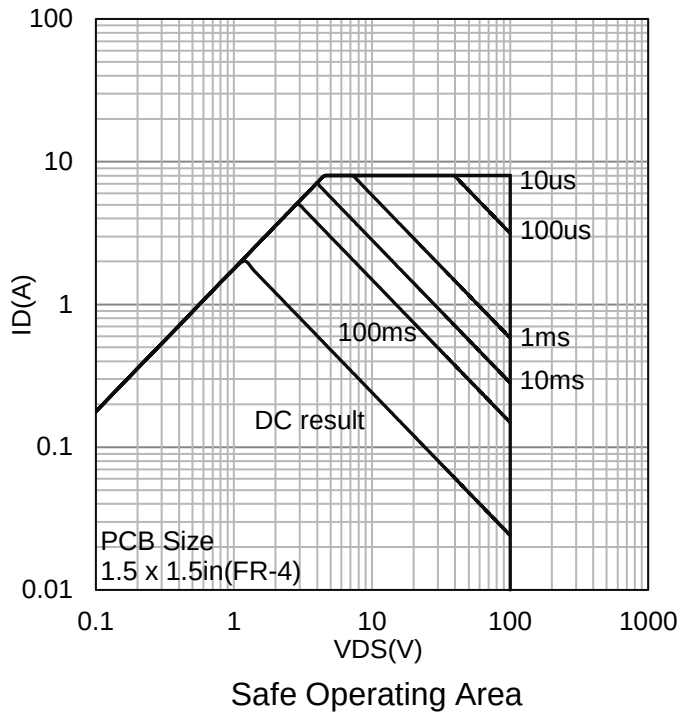
7. ELECTRICAL CHARACTERISTICS CURVES



7. ELECTRICAL CHARACTERISTICS CURVES(Con.)

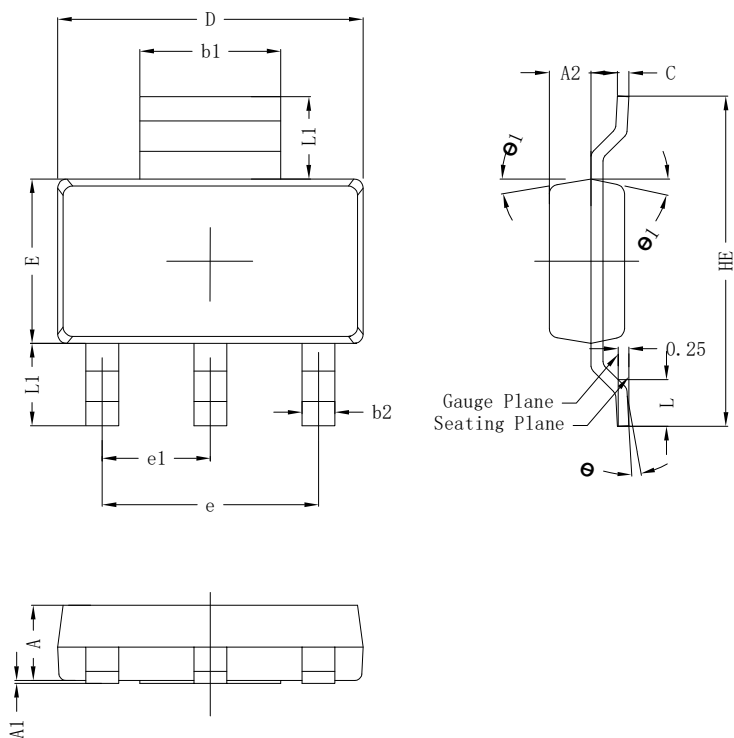


7. ELECTRICAL CHARACTERISTICS CURVES(Con.)



8.OUTLINE AND DIMENSIONS

SOT223

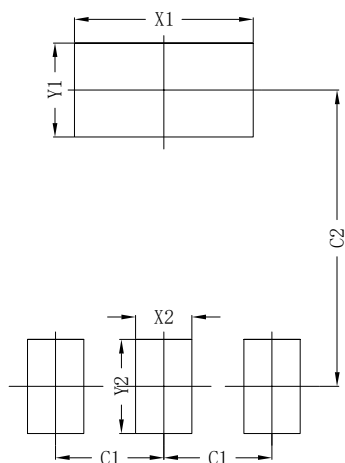


SOT223			
DIM	MIN	NOR	MAX
A	1.50	1.60	1.70
A1	0.00	0.05	0.10
A2	0.80	0.90	1.00
b1	2.90	3.02	3.10
b2	0.60	0.72	0.80
c	0.20	0.27	0.35
D	6.30	6.50	6.70
E	3.30	3.50	3.70
e	4.60BSC		
e1	2.30BSC		
HE	6.80	7.00	7.20
L	0.80	1.00	1.20
L1	1.75(REF)		
θ	0°~8°		
θ 1	8°	10°	12°
All Dimensions in mm			

GENERAL NOTES

1. Top package surface finish $Ra0.4 \pm 0.2\mu m$
2. Bottom package surface finish $Ra0.7 \pm 0.2\mu m$
3. Side package surface finish $Ra0.4 \pm 0.2\mu m$
4. Protrusion or Gate Burrs shall not exceed 0.10mm per side.

9.SOLDERING FOOTPRINT



SOT223	
DIM	(mm)
X1	3.80
Y1	2.00
X2	1.20
Y2	2.00
C1	2.30
C2	6.30

DISCLAIMER

- Curve guarantee in the specification. The curve of test items with electric parameter is used as quality guarantee. The curve of test items without electric parameter is used as reference only.
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- All information contained in this document is current as of the issuing date and subject to change without any prior notice. Before purchasing or using LRC's Products, please confirm the latest information with a LRC sales representative.