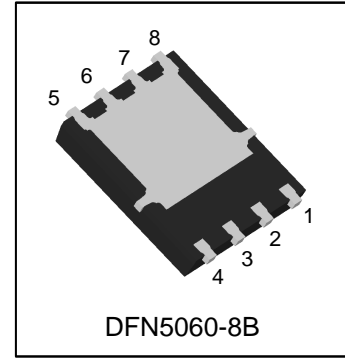


LP74056DT3WG

40V P-Channel Power MOSFET



1. FEATURES

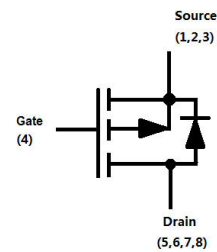
- Low Thermal Resistance.
- Fast switching.
- We declare that the material of product compliance with RoHS requirements and Halogen Free.

2. APPLICATIONS

- Power Tools
- DC/DC Conversion
- Motor Control

3. DEVICE MARKING AND RESISTOR VALUES

Device	Marking	Shipping
LP74056DT3WG	LP74056	5000/Tape&Reel



4. MAXIMUM RATINGS

Parameter		Symbol	Limits	Unit	
Drain-to-Source Voltage		VDS	-40	V	
Gate-to-Source Voltage		VGS	±20	V	
Continuous Drain Current(Note 1)	TA=25°C	ID	-17.4	A	
	TA=100°C		-11.1		
Pulsed Drain Current (Note 2)		TA=25°C	IDM	-70	A
Continuous Drain Current	TC=25°C	ID	-75	A	
	TC=100°C		-47.5		
Pulsed Drain Current		TC=25°C	IDM	-300	A
Avalanche Current		IAS	41.4	A	
Avalanche Energy(L=0.1mH)		EAS	85.7	mJ	
Power Dissipation(Note 1)	TA=25°C	PD	2.98	W	
	TC=25°C		62.5		
Operating Junction and Storage Temperature Range		Tj/Tstg	-55~+150	°C	

5. THERMAL CHARACTERISTICS

Parameter	Symbol	Max	Unit
Thermal Resistance,Junction-to-Ambient(Note 1)	RθJA	42	°C/W
Thermal Resistance,Junction-to-Case	RθJC	2	

Note:1.Surface mounted on "1.5in x 1.5in" FR4 board using 1*1 in pad, 2 oz Cu.

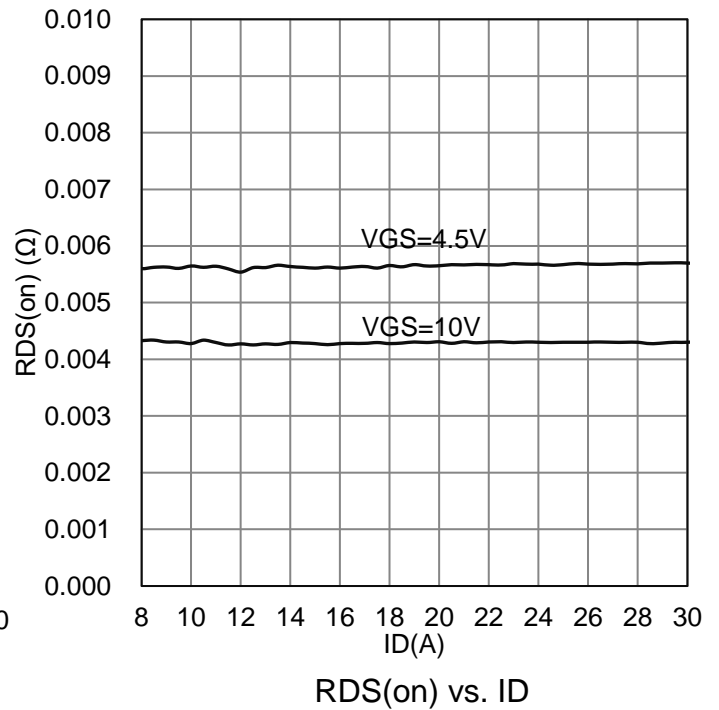
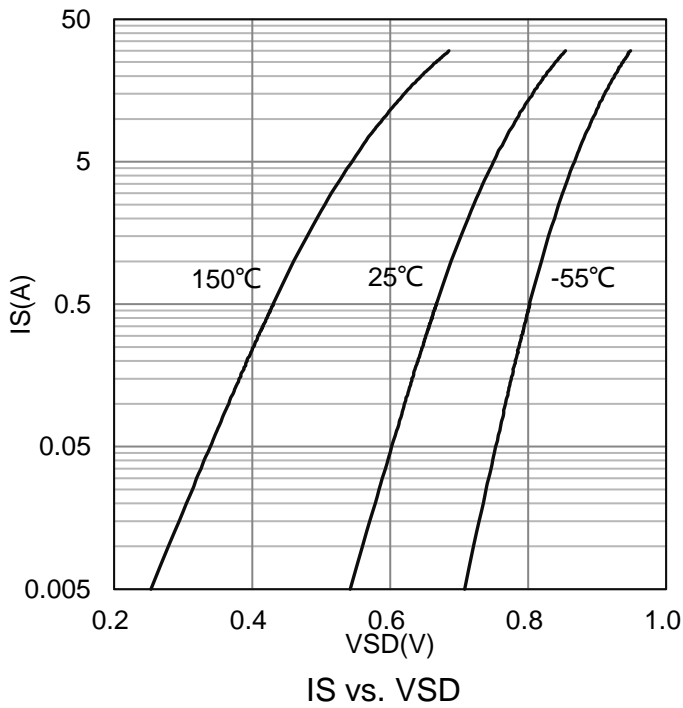
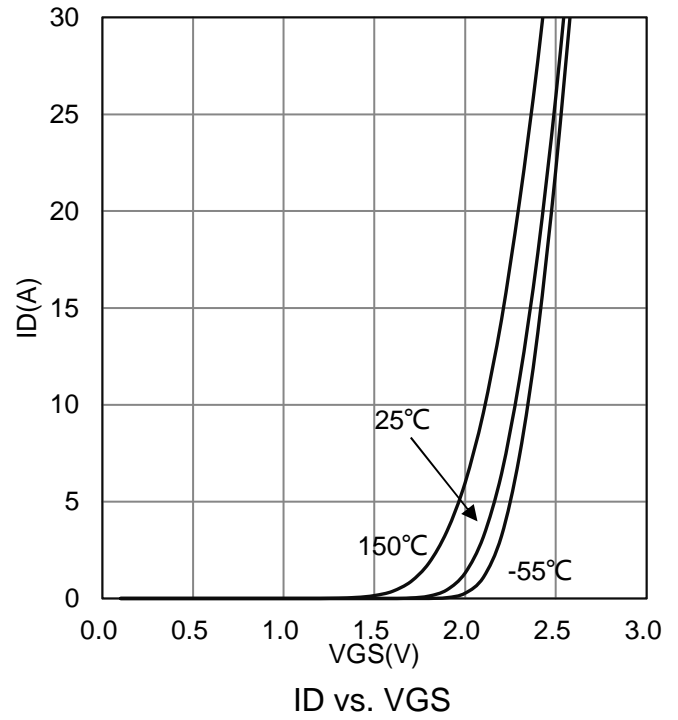
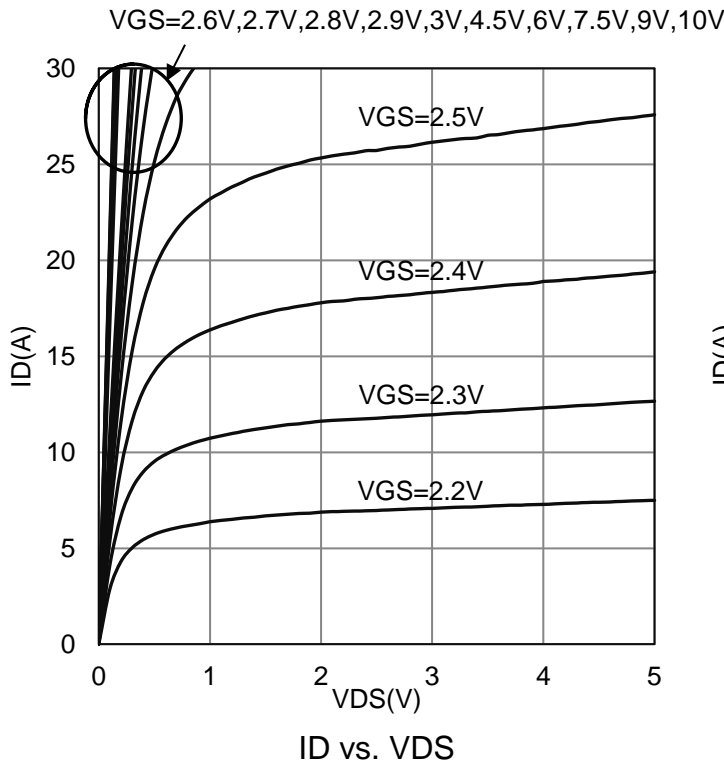
2.Pulse width limited by maximum junction temperature.

6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

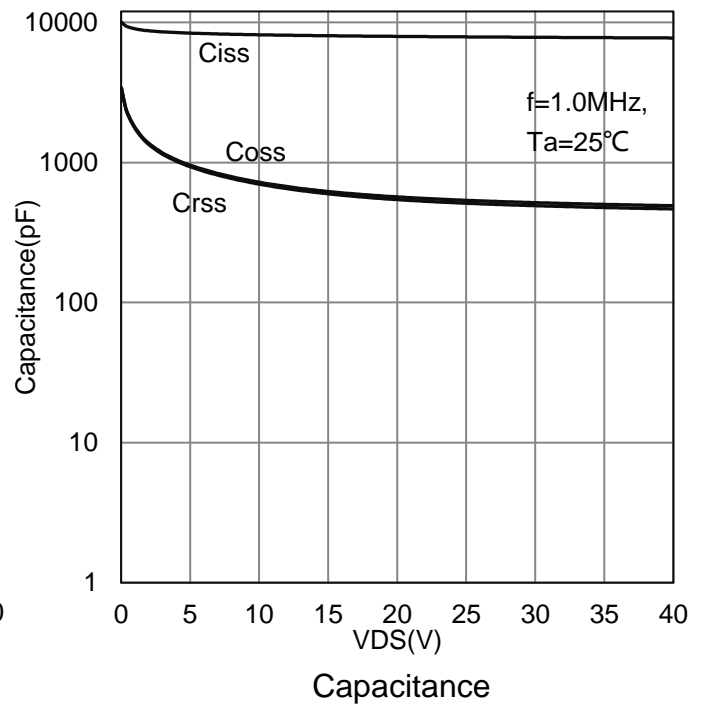
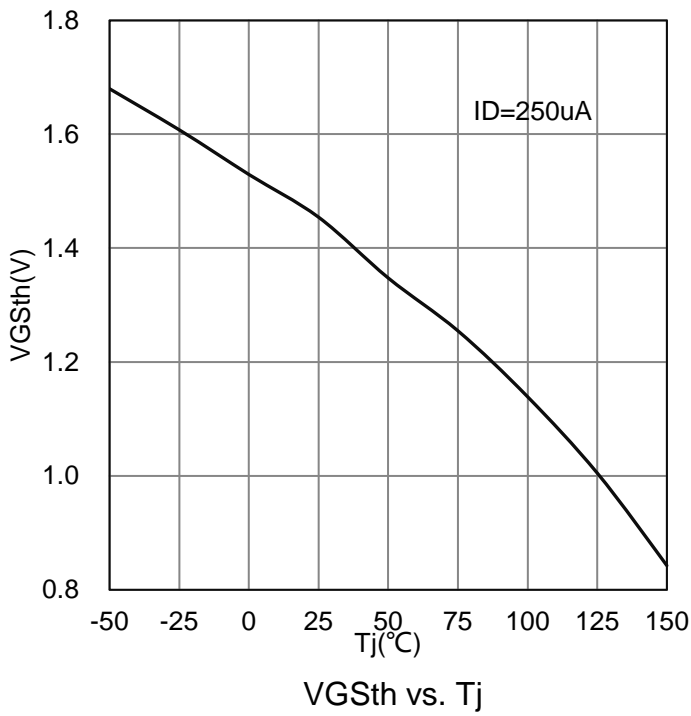
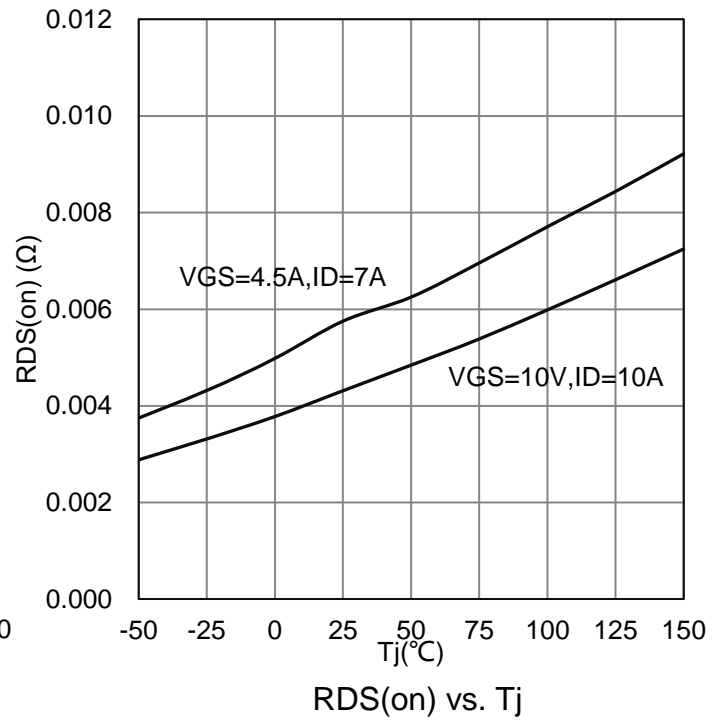
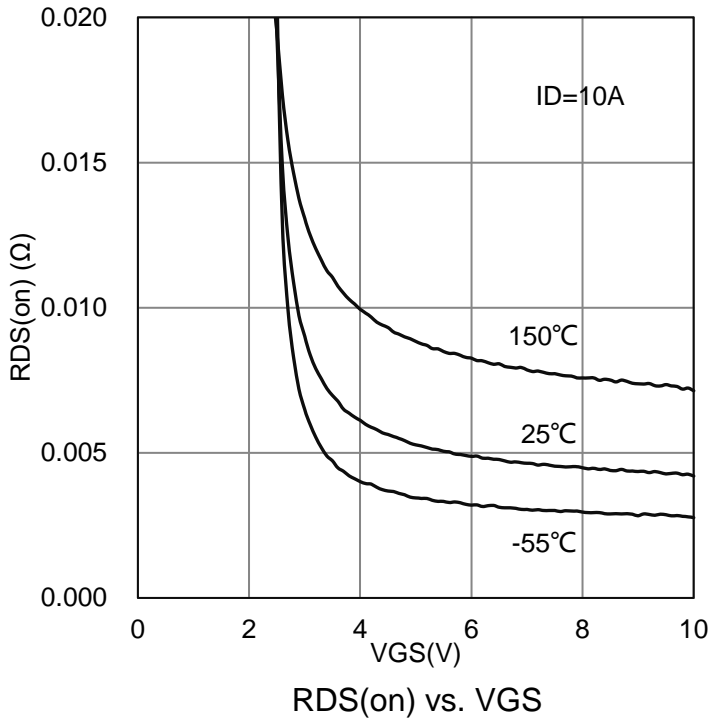
Characteristic	Symbol	Min.	Typ.	Max.	Unit
Static					
Drain–Source Breakdown Voltage (VGS = 0 V, ID = -250 μA)	V(BR)DSS	-40	-	-	V
Zero Gate Voltage Drain Current (VDS= -32 V, VGS= 0 V)	IDSS	-	-	-1	μA
Gate–Body Leakage Current (VDS = 0 V, VGS = ± 20 V)	IGSS	-	-	± 100	nA
Gate Threshold Voltage (VDS = VGS, ID = -250 μA)	VGS(th)	-1.2	-1.8	-2.5	V
Static Drain–Source On–State Resistance(Note 3) (VGS = -10 V, ID = -10 A) (VGS = -4.5 V, ID = -7 A)	RDS(on)	-	4.5 6	5 7.6	mΩ
Diode Forward Voltage (VGS = 0 V, IS = -20 A)	VSD	-	-	-1.2	V
Dynamic					
Input Capacitance	(VDS = -20 V, VGS = 0 V, f = 1MHz)	Ciss	-	8156	-
Output Capacitance		Coss	-	551	-
Reverse Transfer Capacitance		Crss	-	581	-
Total Gate Charge	(VDS = -20 V, VGS = -10 V, ID = -10 A)	Qg	-	151	-
Gate-Source Charge		Qgs	-	17	-
Gate-Drain Charge		Qgd	-	30	-
Turn-On Delay Time	(VDS= -20 V, RL = 2Ω, ID = -10 A, VGEN = -10 V, RGEN = 6 Ω)	td(on)	-	27	-
Rise Time		tr	-	27	-
Turn-Off Delay Time		td(off)	-	340	-
Fall Time		tf	-	105	-

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

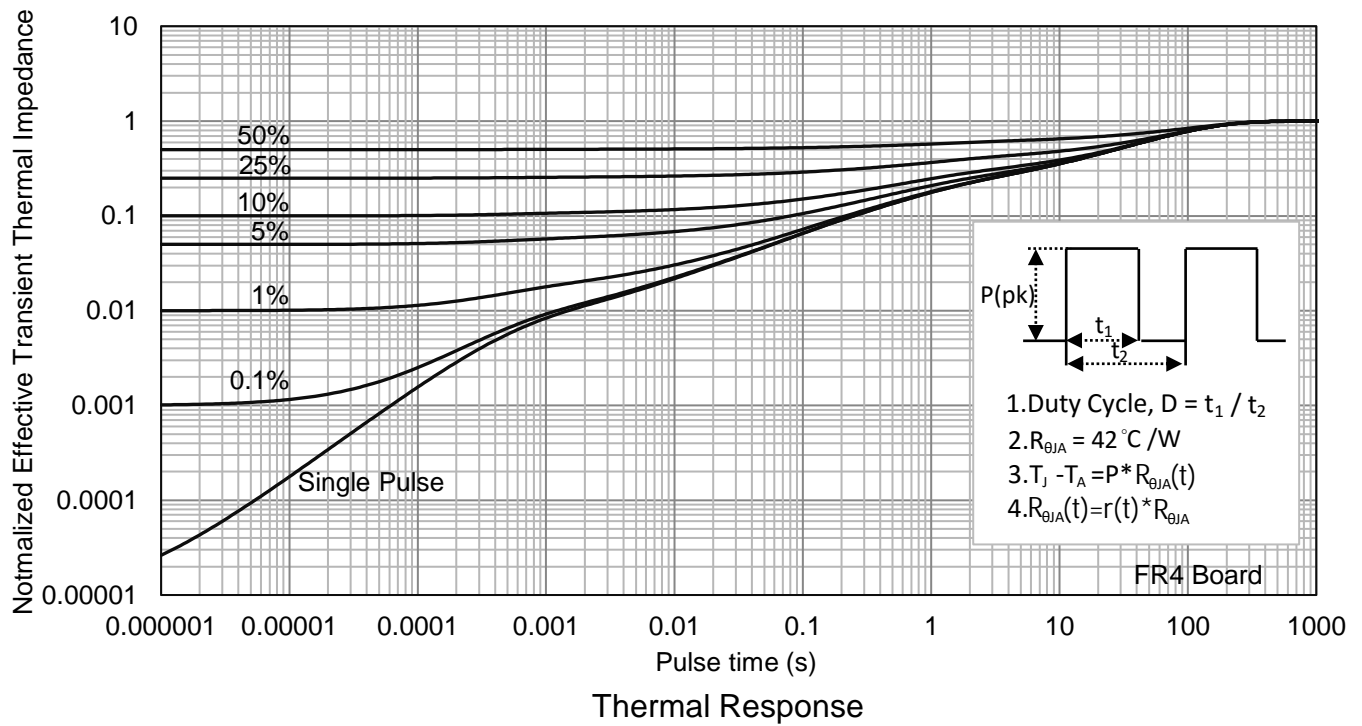
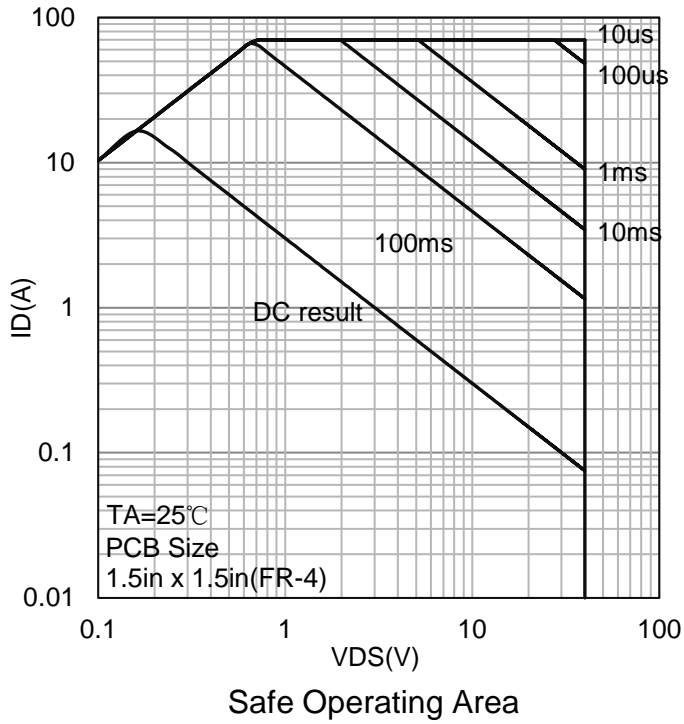
7. ELECTRICAL CHARACTERISTICS CURVES



7. ELECTRICAL CHARACTERISTICS CURVES(Con.)

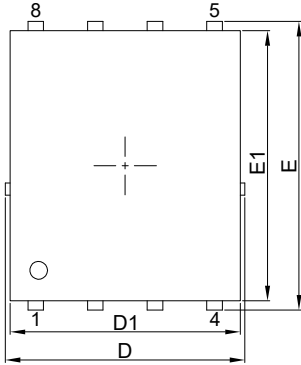


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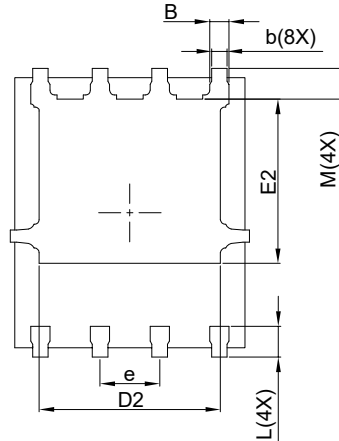


8. OUTLINE AND DIMENSIONS

DFN5060-8B

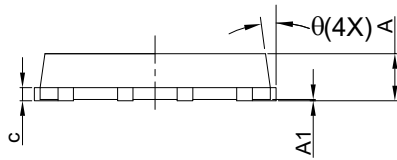


TOP VIEW



BOTTOM VIEW

DFN5060-8B			
DIM	MIN	NOR	MAX
A	0.90	1.00	1.10
A1	0.00	0.02	0.05
E	6.00	6.15	6.30
E1	5.66	5.76	5.86
E2	3.40	3.50	3.60
D	4.95	5.10	5.25
D1	4.80	4.90	5.00
D2	3.76	3.86	3.96
b	0.30	0.35	0.40
B	0.36	0.41	0.46
L	0.56	0.66	0.76
M	0.56	0.66	0.76
e	1.27BSC		
c	0.254REF.		
θ	0°	-	12°

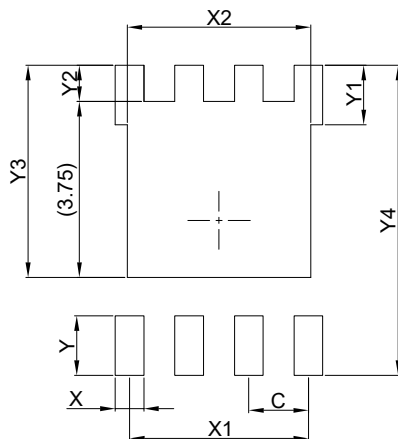


SIDE VIEW

GENERAL NOTES

1. Top package surface finish Ra Max0.4um
2. Bottom package surface finish Ra Max0.4um
3. Side package surface finish Ra Max0.4um
4. Protrusion or Gate Burrs shall not exceed 0.05mm per side
5. Offcenter Max0.038mm; Mismatch Max 0.038mm.

9. SOLDERING FOOTPRINT



DFN5060-8B	
DIM	(mm)
C	1.27
X	0.61
X1	3.81
X2	3.91
Y	1.27
Y1	1.27
Y2	0.77
Y3	4.52
Y4	6.61

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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