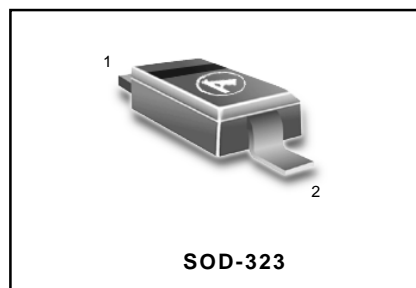


Switching Diode

LMDL6050T1G
S-LMDL6050T1G

FEATURE

- We declare that the material of product compliance with RoHS requirements.
- S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.



ORDERING INFORMATION

Device	Marking	Shipping
LMDL6050T1G S-LMDL6050T1G	5A	3000/Tape&Reel
LMDL6050T3G S-LMDL6050T3G	5A	10000/Tape&Reel



MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Reverse Voltage	V_R	70	Vdc
Forward Current	I_F	200	mAdc
Peak Forward Surge Current	$I_{FM(surge)}$	500	mAdc

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board,* $T_A = 25^\circ\text{C}$	P_D	200	mW
Derate above 25°C		1.57	mW/ $^\circ\text{C}$
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	635	$^\circ\text{C/W}$
Junction and Storage Temperature	T_J, T_{stg}	150	$^\circ\text{C}$

**FR-4 Minimum Pad

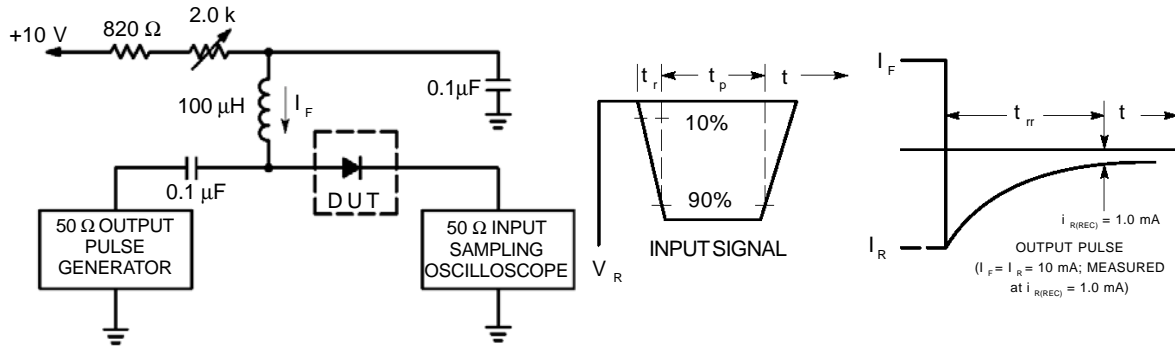
ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
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OFF CHARACTERISTICS

Reverse Breakdown Voltage ($I_{(BR)} = 100 \mu\text{Adc}$)	$V_{(BR)}$	70	—	Vdc
Reverse Voltage Leakage Current ($V_R = 50 \text{Vdc}$)	I_R	—	0.1	μAdc
Forward Voltage ($I_F = 1.0 \text{mAdc}$)	V_F	0.55	0.7	Vdc
($I_F = 100 \text{mAdc}$)		0.85	1.1	
Reverse Recovery Time ($I_F = I_R = 10 \text{mAdc}, I_{R(REC)} = 1.0 \text{mAdc}$) (Figure 1)	t_{rr}	—	4.0	ns
Capacitance ($V_R = 0 \text{V}$)	C	—	2.5	pF

LMDL6050T1G,S-LMDL6050T1G



- Notes: 1. A 2.0 kΩ variable resistor adjusted for a Forward Current (I_F) of 10mA.
- 2. Input pulse is adjusted so $I_{R(\text{peak})}$ is equal to 10mA.
- 3. $t_p \gg t_{rr}$

Figure 1. Recovery Time Equivalent Test Circuit

TYPICAL CHARACTERISTICS

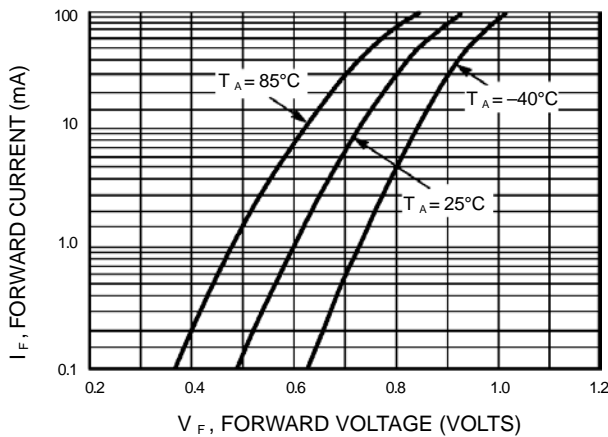


Figure 2. Forward Voltage

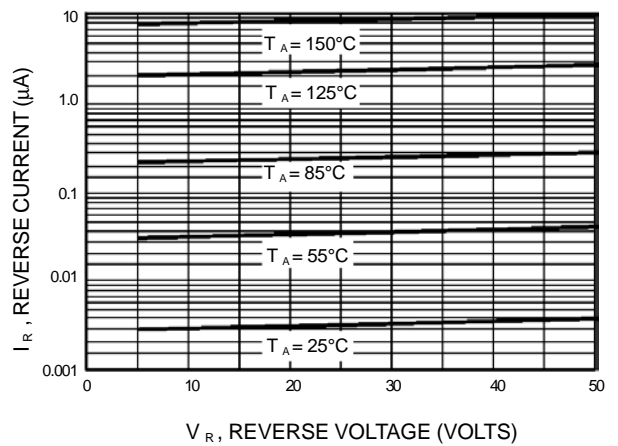


Figure 3. Leakage Current

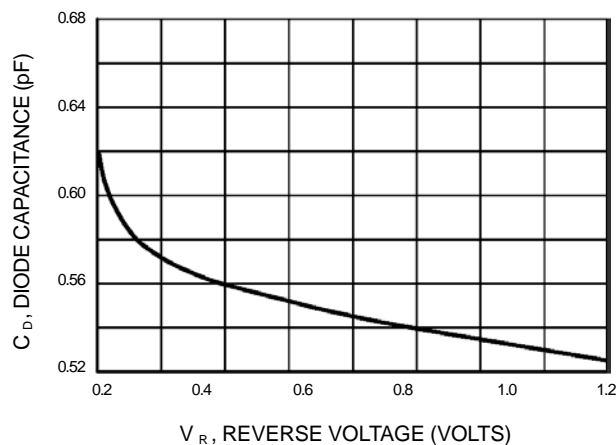
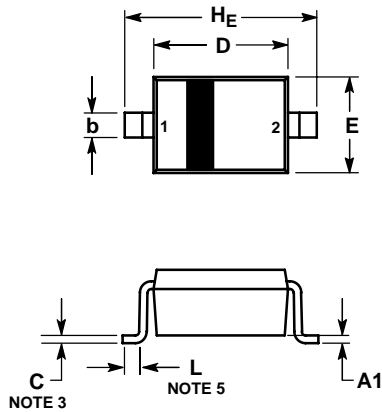


Figure 4. Capacitance

LMDL6050T1G,S-LMDL6050T1G

SOD-323

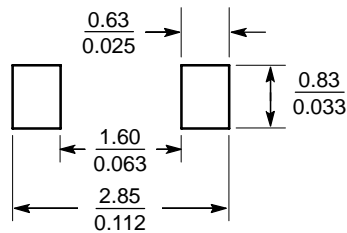


NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. LEAD THICKNESS SPECIFIED PER L/F DRAWING WITH SOLDER PLATING.
4. DIMENSIONS A AND B DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.
5. DIMENSION L IS MEASURED FROM END OF RADIUS.

DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.031	0.035	0.040
A1	0.00	0.05	0.10	0.000	0.002	0.004
A3	0.15 REF			0.006 REF		
b	0.25	0.32	0.4	0.010	0.012	0.016
C	0.089	0.12	0.177	0.003	0.005	0.007
D	1.60	1.70	1.80	0.062	0.066	0.070
E	1.15	1.25	1.35	0.045	0.049	0.053
L	0.08			0.003		
H _E	2.30	2.50	2.70	0.090	0.098	0.105

SOLDERING FOOTPRINT*



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