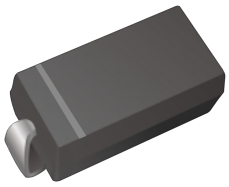
General Purpose Silicon Rectifier

Features



- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Construction utilizes void-free molded plastic technique
- Low reverse leakage
- High forward surge current capability
- Lead free in comply with EU RoHS 2011/65/EU directives

Mechanical Data

- Case: DSMB
- Terminals: leads solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any

Ordering Information

Part Number	Marking	Shipping	Reel
LTM540-TR3K	M540	3000PCS Tape&Reel	13 inchs

Maximum Ratings and Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.
Single phase half-wave 60Hz,resistive or inductive load,for capacitive load current derate by 20%.

Rating	Symbol	LTM540	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	4000	V
Maximum RMS voltage	V_{RMS}	2800	V
Maximum DC blocking voltage	V_{DC}	4000	V
Maximum average forward rectified current 0.2”(5mm) lead length at T_A=50℃	$I_{(AV)}$	1.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	25	A
Maximum instantaneous forward voltage at 1.0A	V_F	2.4	V
Maximum DC reverse current T_A=25℃ at rated DC blocking voltage T_A=100℃	I_R	5 150	μA
Typical junction capacitance (Note1)	C_J	20	pF
Typical thermal resistance (Note2)	$R_{\theta JA}$	100	℃/W
Operating junction and storage temperature range	T_J,T_{STG}	-55 to +150	℃

Note:(1) Measured at 1MHz and applied reverse voltage of 4.0V D.C.
(2) Thermal resistance from junction to ambient at 0.2”(5mm) lead length,P.C.B. mounted.

Characteristics Curves

Fig.1 FORWARD CURRENT DERATING CURVE

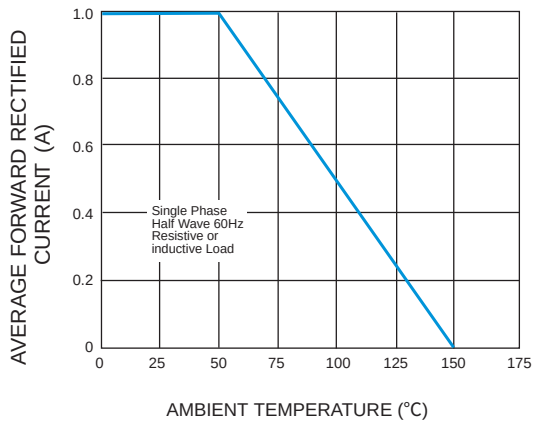


Fig.2 MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

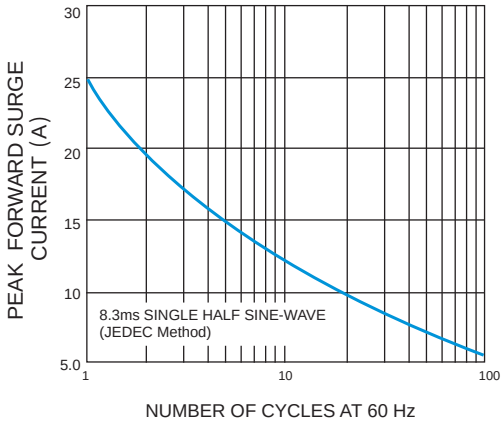


Fig.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

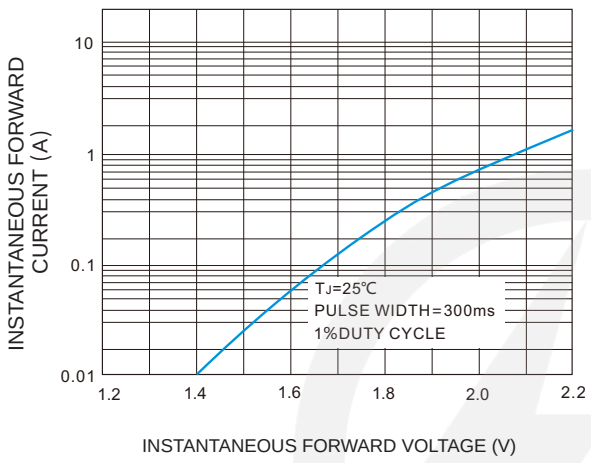
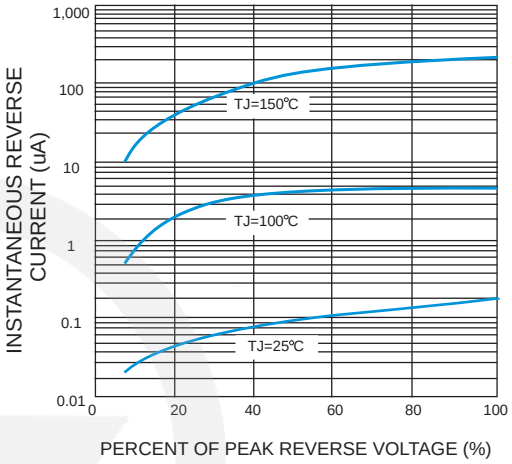
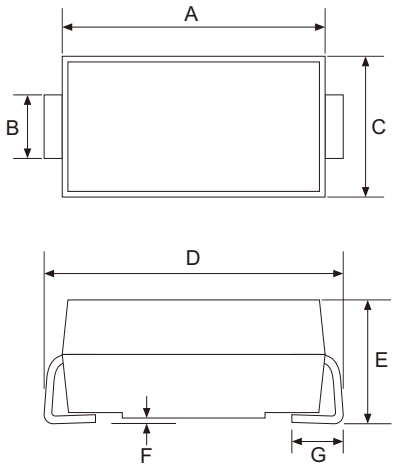


Fig.4 TYPICAL REVERSE CHARACTERISTICS



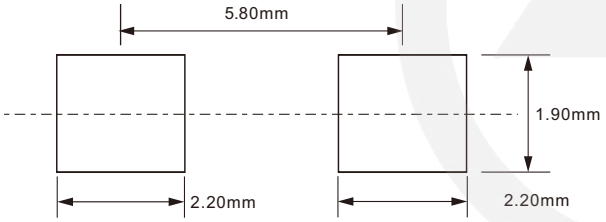
DSMB Package Outline



Unit: mm

SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	5.60	5.95
B	1.10	1.70
C	2.85	3.15
D	6.85	7.35
E	2.60	3.00
F	0.13 TYP.	
G	0.85	1.45

DSMB Suggest Pad Layout

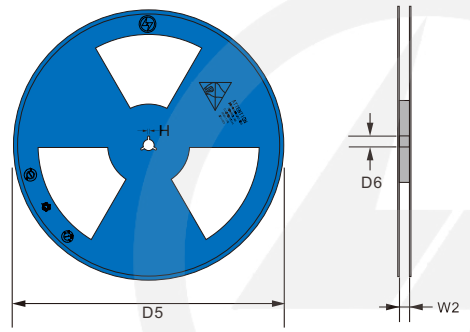


Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm
3.The pad layout is for reference purpose only.

Reel Dimensions

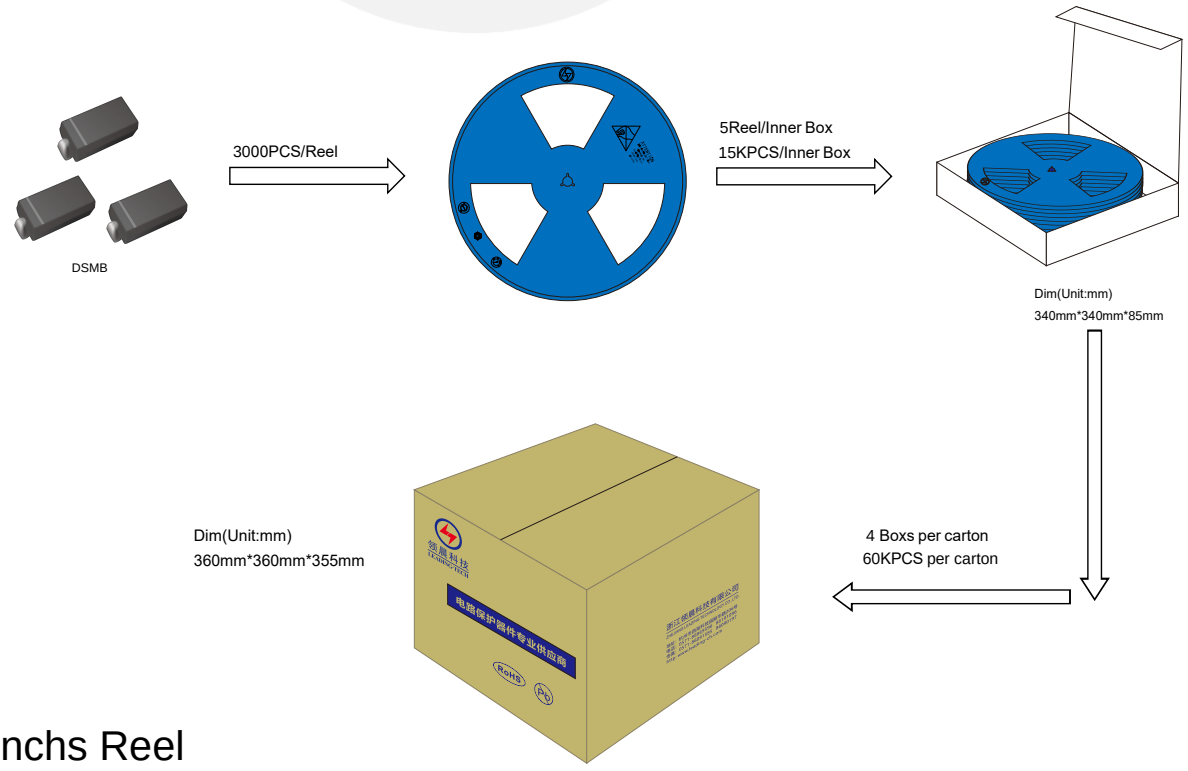
Unit：mm

13” Reel



D5	Φ330.0±2.0
D6	Φ13.5±0.5
H	2.5±1.0
W2	12±2.0
Quantity: 3000PCS	

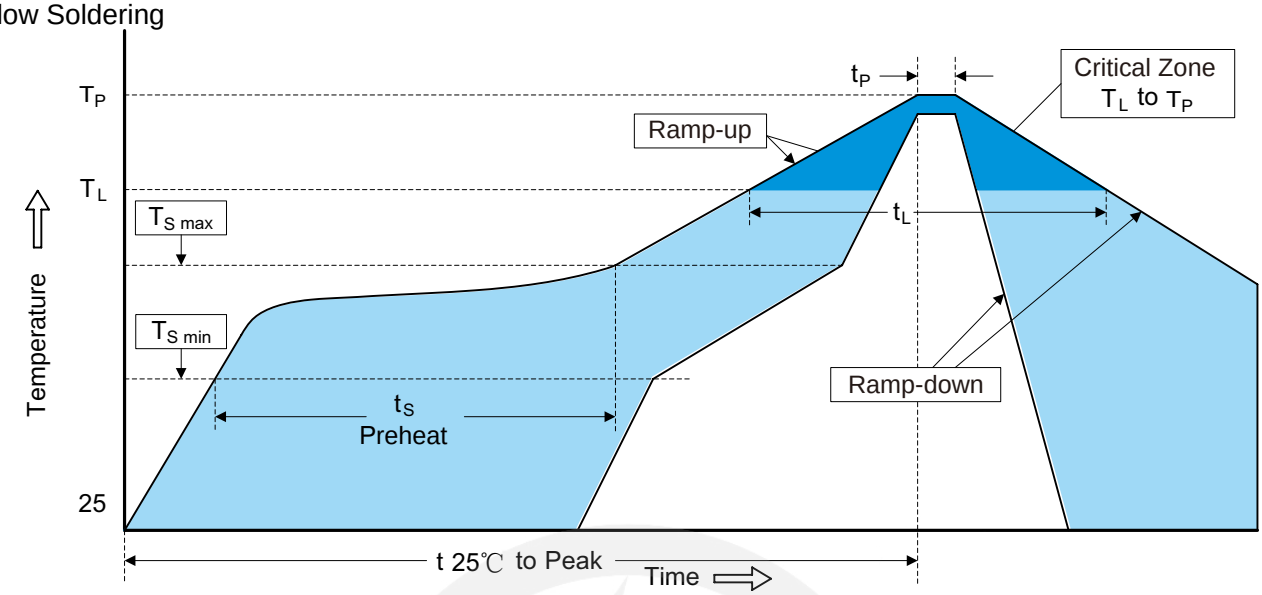
Packaging



13 inchs Reel

Recommended Soldering Conditions

Reflow Soldering



Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T_L to T_P)	3℃/second max.
Preheat -Temperature Min ($T_{S\ min}$) -Temperature Max ($T_{S\ max}$) -Time (min to max) (t_S)	 150℃ 200℃ 60-180 seconds
$T_{S\ max}$ to T_L -Ramp-up Rate	 3℃/second max.
Time maintained above: -Temperature (T_L) -Time (t_L)	 217℃ 60-150 seconds
Peak Temperature (T_P)	260℃
Time within 5℃ of actual Peak Temperature (t_P)	20-40 seconds
Ramp-down Rate	6℃/second max.
Time 25℃ to Peak Temperature	8 minutes max.

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Version Update Information

Series NO.	Enactment/Revision Date	Effective Date	Version	Revision content	Revision Reason	Revision Person	Note
01	2024.03.16	2024.03.16	3.0	New File	/	Ding	
02	2025.06.17	2025.06.17	3.1	Update packaging information	/	Ding	
02	2025.08.26	2025.08.26	3.2	Modify packaging information	/	Ding	