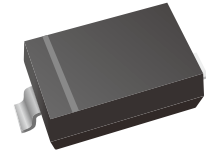


Surface Mount Schottky Barrier Rectifier

Features

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- High Conductance
- Also Available in Lead Free Version
- Lead free in comply with EU RoHS 2011/65/EU directives



Mechanical Data

- Case: SOD-123
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Approx. Weight: 10.5mg

Ordering Information

Part Number	Shipping	Reel
LT0520W THRU LT0540W-TR3	3000PCS Tape&Reel	7 inches
LT0520W THRU LT0540W-TR12	12000PCS Tape&Reel	13 inches

Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbol	LT0520W	LT0530W	LT0540W	Unit	
Peak Repetitive Reverse Voltage	V_{RRM}	20	30	40	V	
RMS reverse voltage reverse voltage (DC)	V_{RMS}	14	21	28	V	
Maximum DC Blocking Voltage	V_{DC}	20	30	40	V	
Maximum Average Forward Current at Ta=25°C	I_o	0.5			A	
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	5.5			A	
Maximum Instantaneous Forward Voltage	V_F	IF=0.1A	0.33	0.375	–	V
		IF=0.5A	0.39	0.43	0.51	
		IF=1A	–	–	0.62	
Reverse current	I_R	VR=10V	75	–	–	uA
		VR=15V	–	20	–	
		VR=20V	250	–	10	
		VR=30V	–	130	–	
		VR=40V	–	–	20	
Thermal Resistance, Junction to Ambient Air	$R_{\theta JA}$	200			°C/W	
Junction temperature	T_j	-55 to +125			°C	
Storage temperature	T_{stg}	-55 to +150			°C	



characteristics Curves

Fig.1 Forward Current Derating Curve

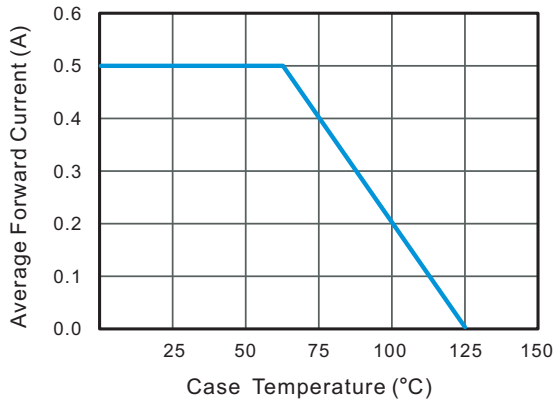


Fig.2 Typical Reverse Characteristics

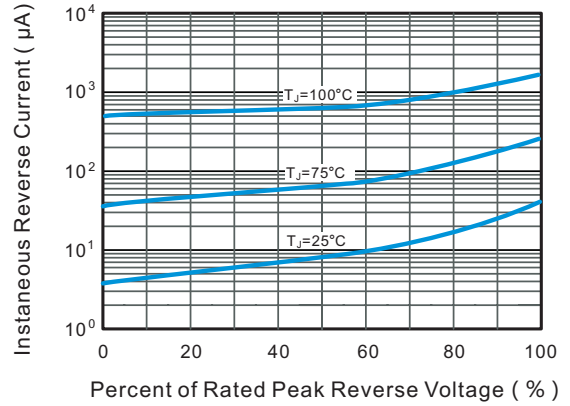


Fig.3 Typical Forward Voltage

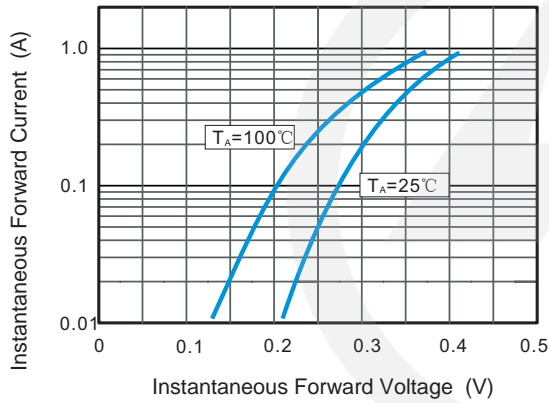


Fig.4 Typical Junction Capacitance

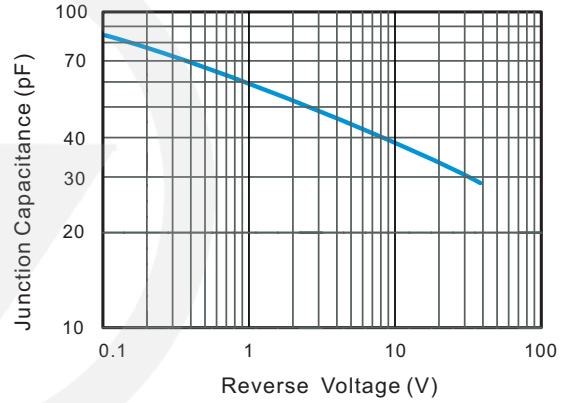
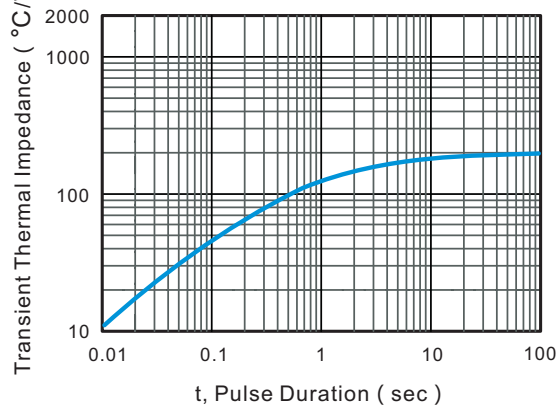
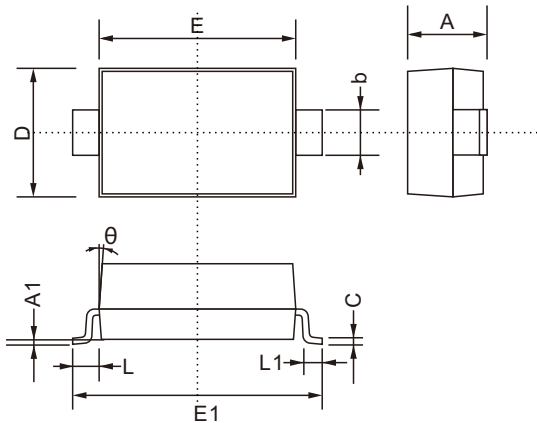


Fig.5 Typical Transient Thermal Impedance



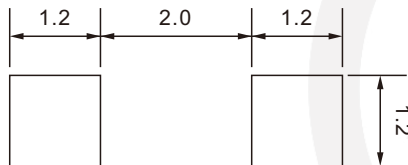
SOD-123 Package Outline

Unit: mm



SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.900	1.300
A1	0.000	0.200
b	0.450	0.750
C	0.080	0.230
D	1.500	1.800
E	2.500	2.800
E1	3.550	3.900
L1	0.250	0.450
L	0.5REF	
θ	8°	

SOD-123 Suggested Pad Layout



Note:

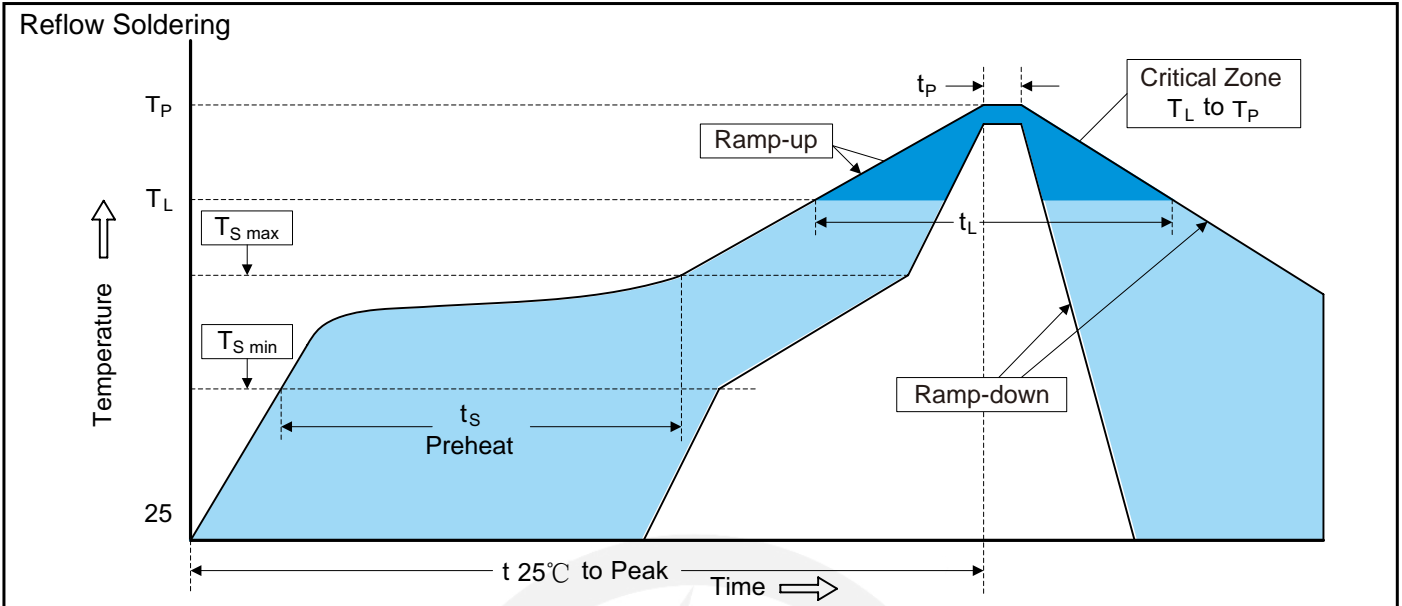
1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$
3. The pad layout is for reference purpose only.

Marking

Type number	Marking code
LT0520W	SD
LT0530W	SE
LT0540W	SF



Recommended Soldering Conditions



Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T _L to T _P)	3°C/second max.
Preheat	
-Temperature Min (T _{S min})	150°C
-Temperature Max (T _{S max})	200°C
-Time (min to max) (t _s)	60-180 seconds
T _{S max} to T _L	
-Ramp-up Rate	3°C/second max.
Time maintained above:	
-Temperature (T _L)	217°C
-Time (t _L)	60-150 seconds
Peak Temperature (T _P)	260°C
Time within 5°C of actual Peak Temperature (t _p)	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C 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	2024.05.17	2024.05.17	3.0	New file	/	Ding	