TAIWAN SEMICONDUCTOR

LSR102 - LSR106

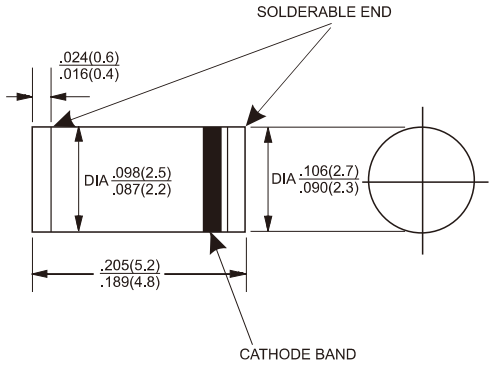
1.0 AMP. Surface Mount Schottky Barrier Rectifiers

MELF

RoHS COMPLIANCE

Features

- ✧ Surge overload ratings to 25 amperes peak
- ✧ Ideal for printed circuit board
- ✧ Reliable low cost construction utilizing molded plastic technique results in inexpensive product
- ✧ Terminal : Pure tin plated, lead free
- ✧ Mounting position: Any
- ✧ Weight: 0.12 grams



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%

Type Number	Symbol	LSR102	LSR103	LSR104	LSR105	LSR106	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	20	30	40	50	60	V
Maximum RMS Voltage	V_{RMS}	14	21	28	35	42	V
Maximum DC Blocking Voltage	V_{DC}	20	30	40	50	60	V
Maximum Average Forward Rectified Current See Fig. 1	$I_{F(AV)}$	1.0					A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	25					A
Maximum Instantaneous Forward Voltage @1.0A	V_F	0.55			0.70		V
Maximum DC Reverse Current at @ T_A=25 °C Rated DC Blocking Voltage(Note1)@ T_A=125 °C	I_R	1.0 10					mA mA
Typical Junction Capacitance (Note2)	Cj	110			80		pF
Typical Thermal Resistance	$R_{\theta JA}$	15					°C/W
Operating Temperature Range	T_J	- 65 to + 125			- 65 to + 150		°C
Storage Temperature Range	T_{STG}	- 65 to + 150					°C

Note: 1. Pulse Test with PW=300 usec,1% Duty Cycle
2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C

Version: C10

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RATINGS AND CHARACTERISTIC CURVES (LSR102 THRU LSR106)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

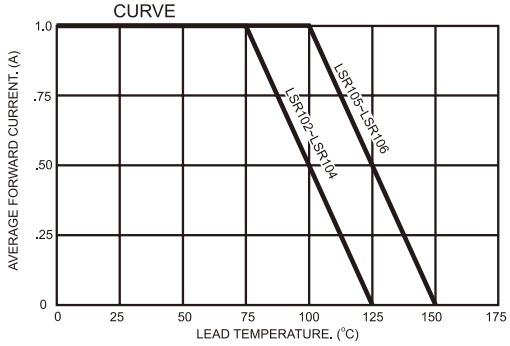

FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

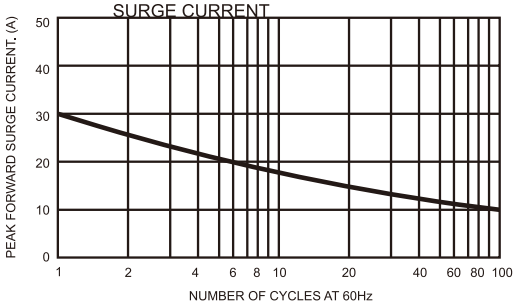

FIG.3- TYPICAL FORWARD CHARACTERISTICS

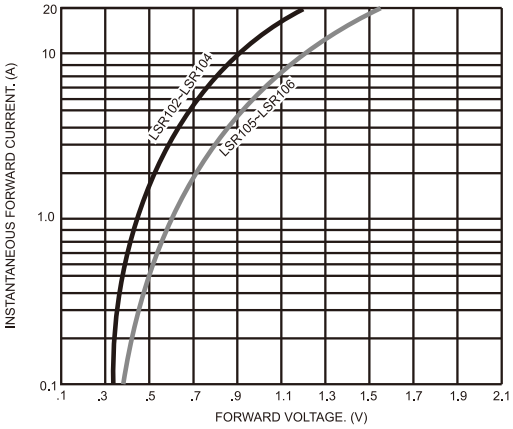

FIG.4- TYPICAL REVERSE CHARACTERISTICS

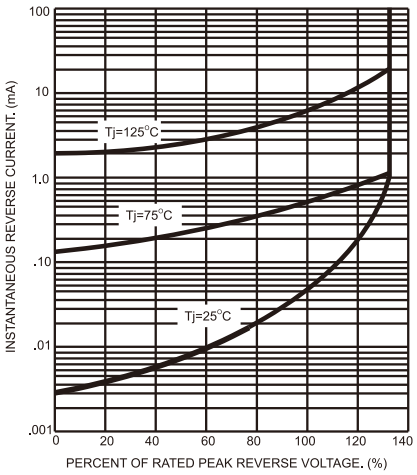

FIG.5- TYPICAL JUNCTION CAPACITANCE

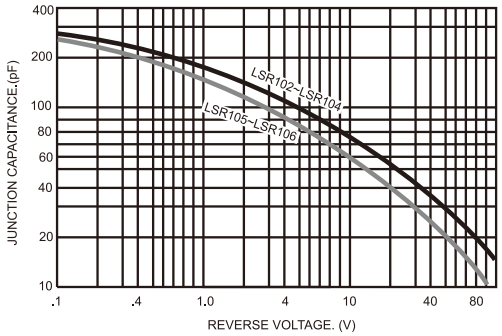
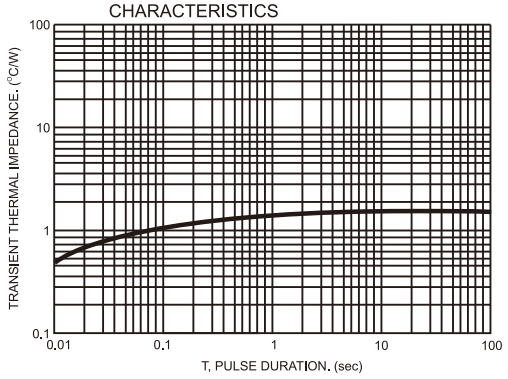
FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS