



DESCRIPTION

The MBR140SF is available in SOD-123 Package

- Guarding for Stress Protection
- Low Forward Voltage
- Free wheeling , and polanty protection applications

ORDERING INFORMATION

Package Type	Part Number
SOD-123	MBR140SF
SPQ	3,000pcs/Reel
AiT provides all RoHS Compliant Products	

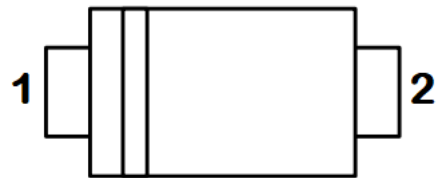
MECHANICAL DATA

Case: Molded plastic body

Terminals : Plated leads solderable per
MIL-STD-750,Method2026

Approx Weight:11.7mg

PIN DESCRIPTION





ABSOLUTE MAXIMUM RATINGS

@ T_A = 25°C, unless otherwise specified.

Parameter	Symbol	Value	Unit
Peak repetitive peak reverse voltage	V _{RRM}	40	V
Working peak reverse voltage	V _{RWM}		
DC Blocking voltage	V _R		
RMS Reverse voltage	V _{R(RMS)}	28	V
Average rectified output current	I _O	1	A
Peak forward surge current @τ=8.3ms	I _{FSM}	25	A
Repetitive peak forward current	I _{FRM}	625	mA
Power dissipation	P _d	250	mW
Thermal resistance junction to ambient	R _{θJA}	500	K/W
Storage temperature	T _{STG}	-65 to +150	°C
Non-Repetitive peak reverse voltage	V _{RM}	20	V

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability

ELECTRICAL CHARACTERISTICS

@ T_A = 25°C, unless otherwise specified.

Parameter	Symbol	Conditions	Min.	Max.	Unit
Reverse breakdown voltage	V _(BR)	I _R =1mA	40	-	V
Reverse voltage leakage current	I _R	V _R =20V	-	1	mA
Forward voltage	V _F	I _F =1A	-	0.6	V
Diode capacitance	C _D	V _R =4V, f=1.0MHz	-	120	pF



TYPICAL PERFORMANCE CHARACTERISTICS

Fig 1. FORWARD CURRENT DERATING CURVE

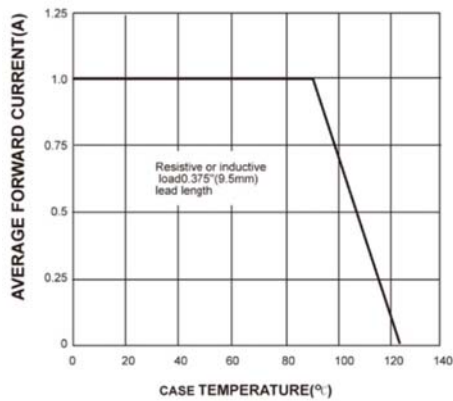


Fig 2. MAXMUM NON-REPETITIVE PEAK FORWARD FORWARD SURGE CURRENT

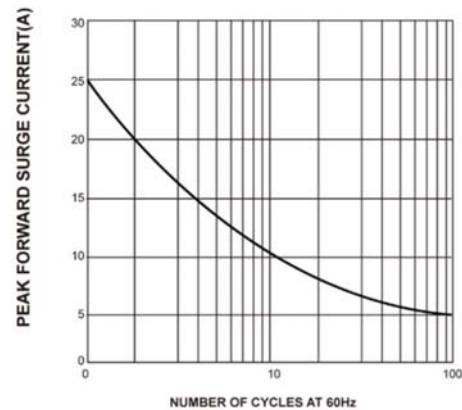


Fig.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

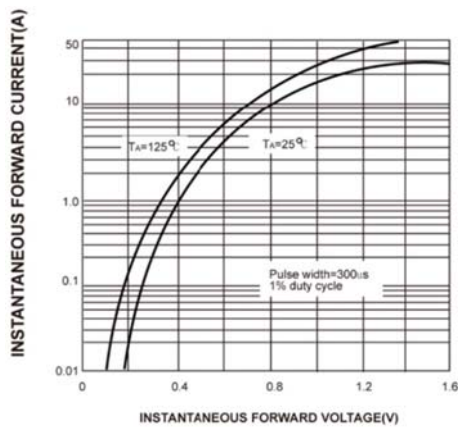


Fig.4 TYPICAL REVERSE CHARACTERISTICS

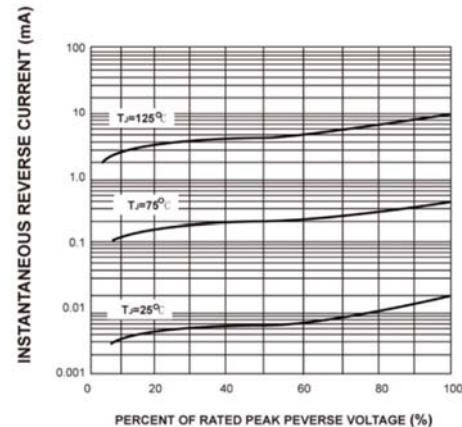


Fig.5 TYPICAL JUNCTION CAPACITANCE

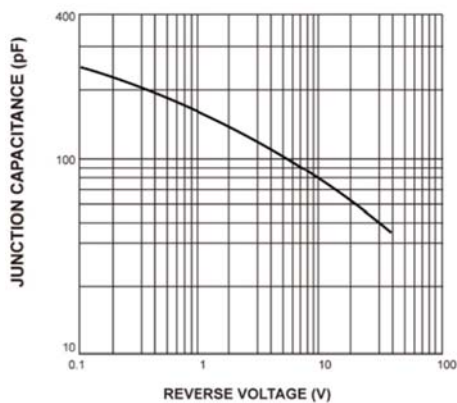
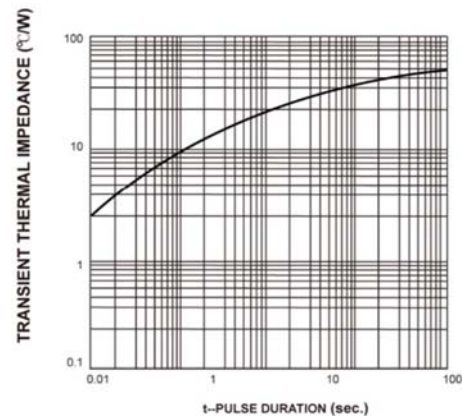


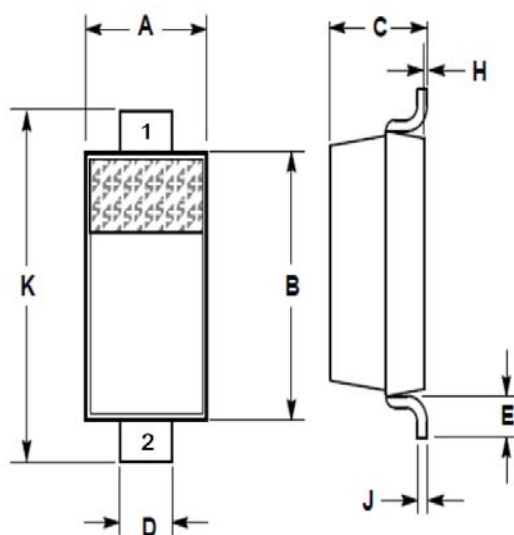
Fig.6 TYPICAL TRANSIENT THERMAL IMPEDANCE



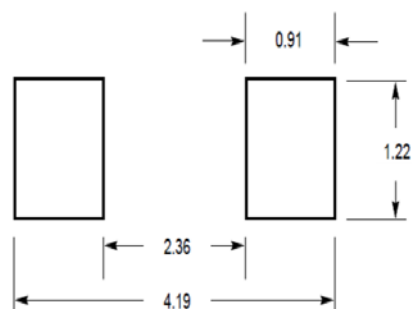


PACKAGE INFORMATION

Dimension in SOD-123 (Unit: mm)



RECOMMEND LAND PATTERN



Symbol	Min.	Max.
A	1.40	1.80
B	2.55	2.85
C	0.95	1.35
D	0.50	0.70
E	0.25	-
H	0.00	0.10
J	-	0.15
K	3.55	3.85



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