

MBR0540FW-AH

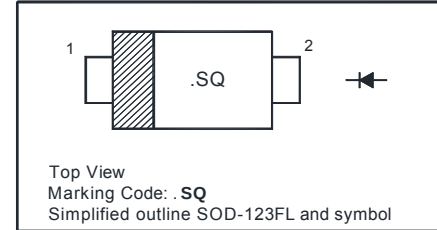
Surface Mount Schottky Barrier Diode

Features

- Low forward voltage
- High conductance
- AEC-Q101 Qualified
- Halogen and Antimony Free(HAF),RoHS compliant

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

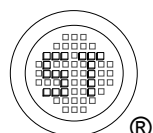
Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	40	V
Reverse Voltage	V_R	40	V
Average Rectified Forward Current	$I_{F(AV)}$	0.5	A
Peak Forward Surge Current (8.3 ms Single Half Sine-wave)	I_{FSM}	20	A
Thermal Resistance Junction to Lead ¹⁾	$R_{\theta JL}$	118	$^\circ\text{C/W}$
Thermal Resistance Junction to Ambient ²⁾	$R_{\theta JA}$	206	$^\circ\text{C/W}$
Operating Temperature Range	T_j	- 65 to + 150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 65 to + 150	$^\circ\text{C}$

¹⁾ Device mounted on FR-4 PCB 0.013 mm.

²⁾ 1 inch" pad size (1 X 0.5 inch for each lead) on FR4 board.

Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Max.	Unit
Forward Voltage at $I_F = 0.5\text{ A}$ at $I_F = 1\text{ A}$ at $I_F = 0.5\text{ A}$, $T_a = 100^\circ\text{C}$ at $I_F = 1\text{ A}$, $T_a = 100^\circ\text{C}$	V_F	0.51 0.62 0.46 0.61	V
Reverse Current at $V_R = 20\text{ V}$ at $V_R = 40\text{ V}$ at $V_R = 20\text{ V}$, $T_a = 100^\circ\text{C}$ at $V_R = 40\text{ V}$, $T_a = 100^\circ\text{C}$	I_R	10 20 5 13	μA μA mA mA



Electrical characteristic curves

Fig 1. Reverse Characteristics

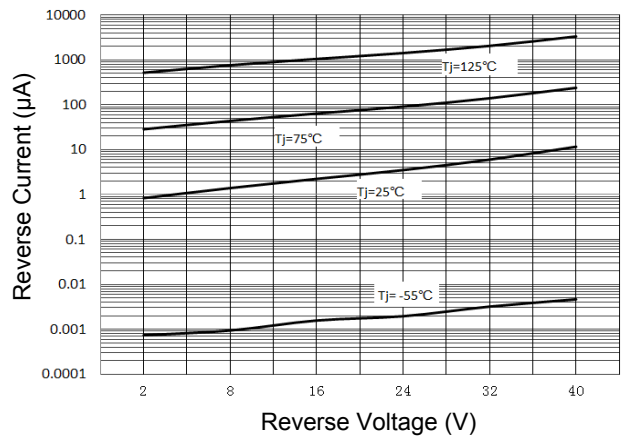


Fig 2. Forward Characteristics

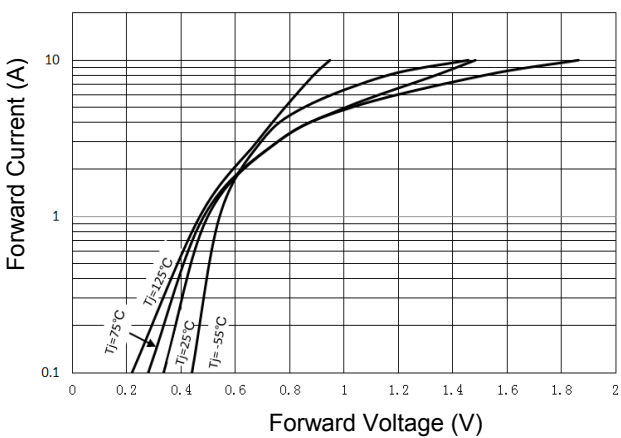


Fig 3. Junction Capacitance

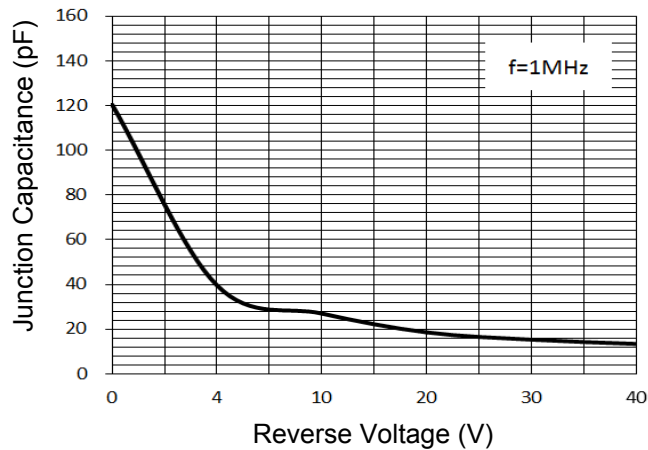


Fig 4. Forward Current Derating Curve

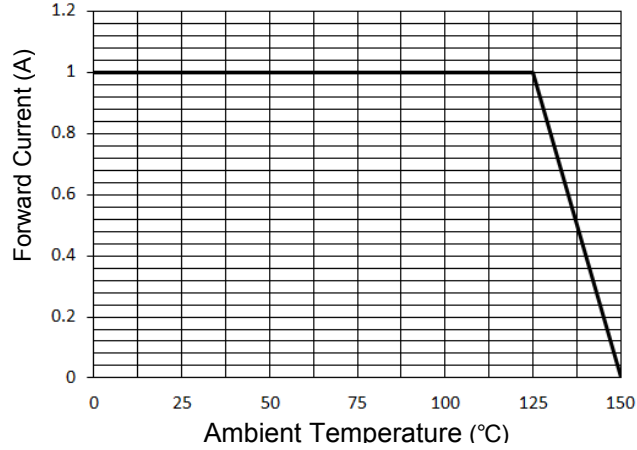
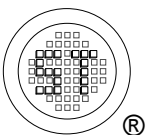
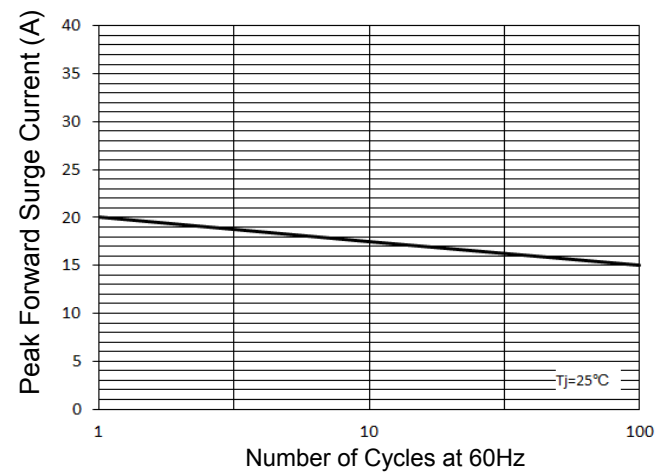


Fig 5. Peak Forward Surge Current

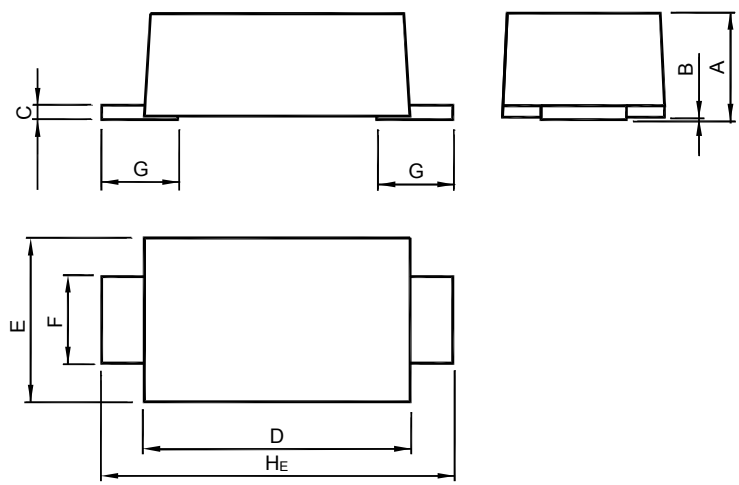


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PACKAGE OUTLINE

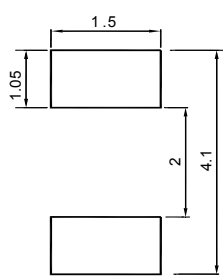
Plastic surface mounted package; 2 leads

SOD-123FL



UNIT	A	B	C	D	E	F	G	H _E
mm	1.08 0.88	0.1 0	0.2 0.1	2.9 2.7	1.9 1.7	1.1 0.8	0.85 0.45	3.9 3.5

Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOD-123FL	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

Marking information

" III " = Cathode line
" • " = HAF (Halogen and Antimony Free)
" SQ " = Part No.
Font type: Arial

