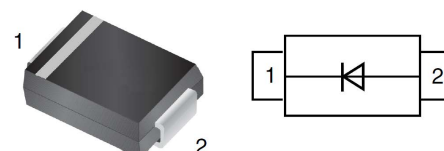


Schottky Barrier Rectifier in DO-214AC/SMA

Features

- Schottky barrier diodes
- Low forward voltage drop
- High Junction Temperature
- Moisture sensitivity: level 1, per J-STD-020
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Add suffix "E" for Halogen Free
- Halogen-free according to IEC 61249-2-21 definition



Applications

For use in low voltage, high frequency inverters, free wheeling, and polarity protection application

Absolute Maximum Ratings			
Ratings at 25 °C, ambient temperature unless otherwise specified			
Parameter	Symbol	MBRS130	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	30	V
Maximum RMS voltage	V_{RMS}	21	V
Maximum DC blocking voltage	V_{DC}	30	V
Maximum average forward rectified current	$I_{F(AV)}$	1.0	A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	30	A
Operating junction and storage temperature range	T_J, T_{STG}	- 55 to + 150	°C

Electrical Characteristics				
(T _A = 25 °C unless otherwise specified)				
Parameter	Test Conditions	Symbol	MBRS130	Unit
Maximum instantaneous forward voltage	$I_F=3A, T_A=25^{\circ}C$	V_F	0.50	V
Maximum DC reverse current at rated DC blocking voltage	$T_A=25^{\circ}C$	I_R	0.50	mA
	$T_A=125^{\circ}C$		10	
Typical junction capacitance	4.0 V, 1 MHz	C_J	110	pF

Thermal Characteristics			
Parameter	Symbol	MBRS130	Unit
Typical thermal resistance ⁽¹⁾	$R_{\theta JA}$	85	°C/W
	$R_{\theta JC}$	46	
	$R_{\theta JI}$	25	

Note1: Thermal resistance from junction to lead, mounted on PCB with 5.0×5.0mm copper pads

Typical Characteristics ($T_{amb} = 25^{\circ}\text{C}$ unless otherwise specified)

Figure 1. Forward Current Derating Curve

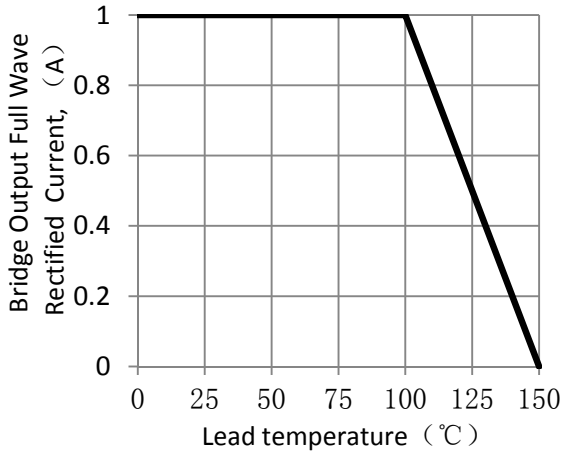


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

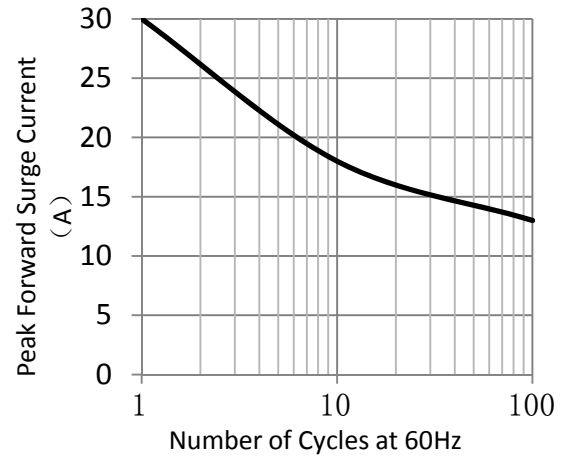


Figure 3. Typical Instantaneous Forward Characteristics

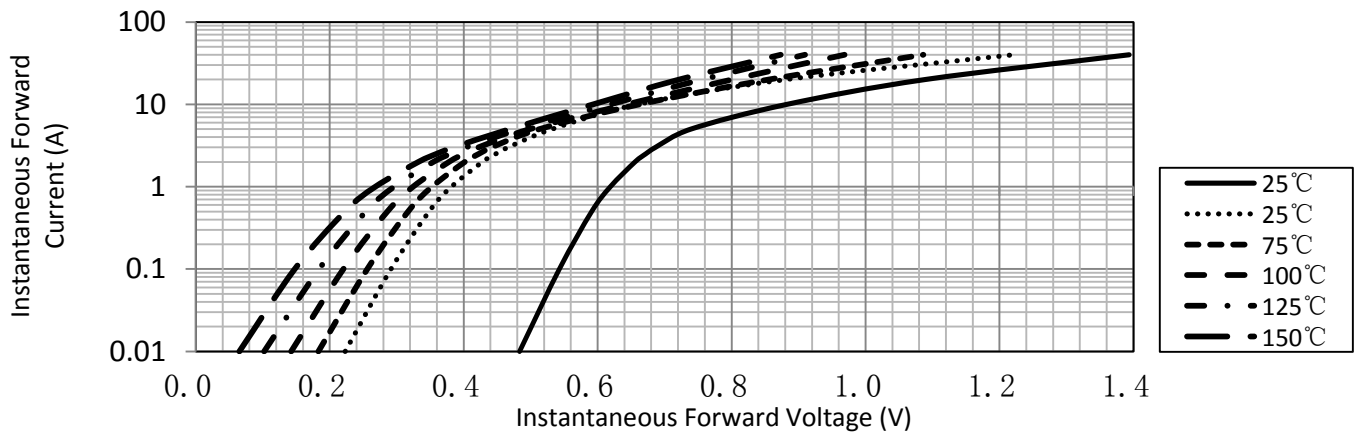
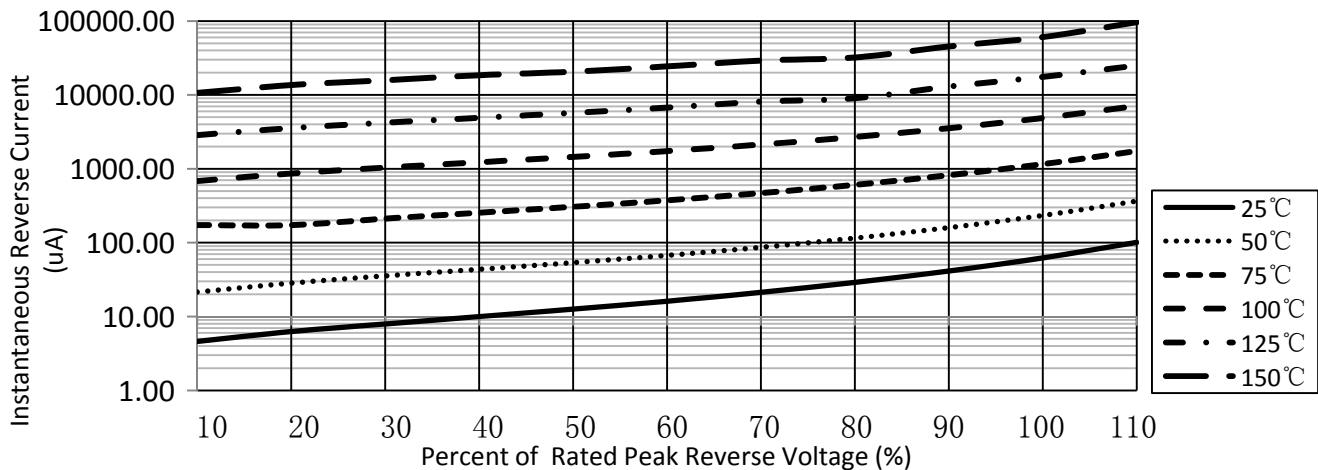
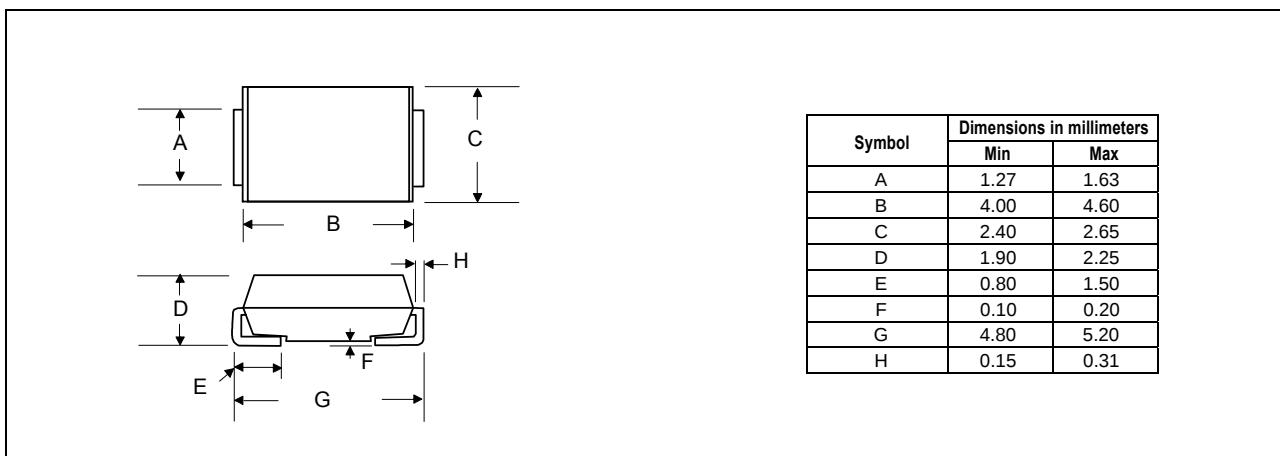


Figure 4. Typical Reverse Characteristics



Package Dimensions



Ordering information

Order code	Package	Packaging option	Base quantity	Packaging specification
MBRS130	DO-214AC/SMA	Tape and reel	5000pcs / reel	EIA STD RS-481

Revision history

Date	Revision	Changes
22-Feb-2024	4.0	Update

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