

### Surface Mount Ultra Low IR Schottky Barrier Rectifier

Voltage 60 V Current 1 A

### **Features**

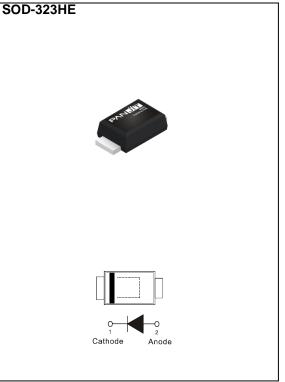
- Low forward voltage drop
- Ideal for automated placement
- Low power loss, high efficiency
- High surge current capability
- AEC-Q101 qualified
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### **Mechanical Data**

• Case: SOD-323HE Package

• Terminals : Solderable per MIL-STD-750, Method 2026

• Approx. Weight: 0.005 grams



## Maximum Ratings and Thermal Characteristics (T<sub>A</sub> = 25°C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS		
Maximum Repetitive Peak Reverse Voltage		$V_{RRM}$	60	V	
Maximum RMS Voltage		V <sub>RMS</sub>	42	V	
Maximum DC Blocking Voltage	V <sub>DC</sub>	60	V		
Maximum Average Forward Current	I <sub>F(AV)</sub>	1	А		
Peak Forward Surge Current: 8.3 ms Single Half Sine- Wave Superimposed On Rated Load		I <sub>FSM</sub>	30	Α	
Typical Junction Capacitance  Measured at 1 MHZ And Applied $V_R = 4 \text{ V}$		Сл	55	pF	
Typical Thermal Resistance	(Note 1)	$R_{\theta JA}$	300		
	(Note 2)	ReJC	29	°C/W	
	(Note 2)	R <sub>θ</sub> J	22		
Operating Junction Temperature Range		TJ	-55~175	°C	
Storage Temperature Range		Tstg	-55~175	°C	



## **Electrical Characteristics** (T<sub>A</sub> = 25°C unless otherwise noted)

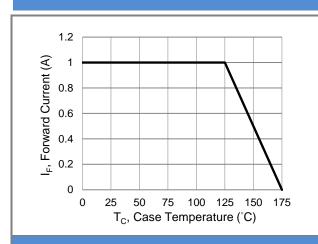
PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage	VF	I <sub>F</sub> = 0.5 A, T <sub>J</sub> = 25 °C	-	0.6	-	V
		I <sub>F</sub> = 1 A, T <sub>J</sub> = 25 °C	-	0.68	0.72	
		I <sub>F</sub> = 0.5 A, T <sub>J</sub> = 125 °C	-	0.49	-	
		I <sub>F</sub> = 1 A, T <sub>J</sub> = 125 °C	-	0.56	-	
Reverse Current	I <sub>R</sub>	V <sub>R</sub> = 48 V, T <sub>J</sub> = 25 °C	-	20	-	nA
		V <sub>R</sub> = 60 V, T <sub>J</sub> = 25 °C	-	0.3	1	uA
		V <sub>R</sub> = 60 V, T <sub>J</sub> = 125 °C	-	80	600	

#### NOTES:

- 1. Mounted on a FR4 PCB, single-sided copper, standard footprint.
- 2. Mounted on a FR4 PCB, single-sided copper, with 100cm<sup>2</sup> copper pad area.



#### **TYPICAL CHARACTERISTIC CURVES**



**Fig.1 Forward Current Derating Curve** 

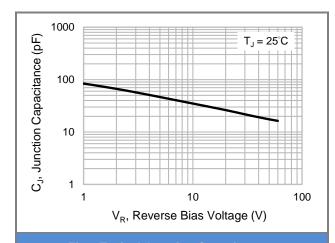


Fig.2 Typical Junction Capacitance

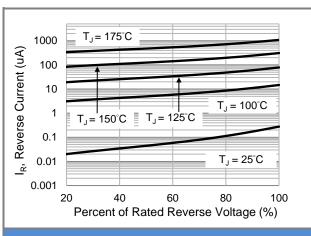


Fig.3 Typical Reverse Characteristics

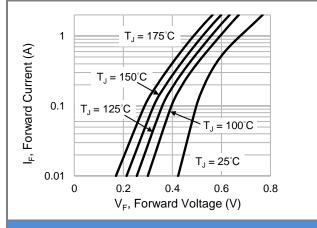


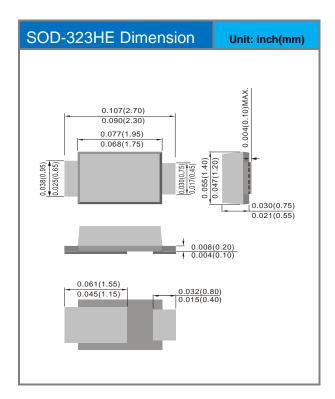
Fig.4 Typical Forward Characteristics

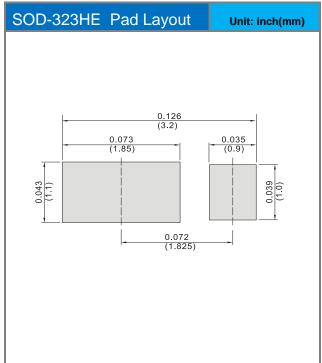


## **Product and Packing Information**

Part No.	Package Type	Packing Type	Marking	
MBR1H60CH-AU	SOD-323HE	5K pcs / 7" reel	1H6	

## **Packaging Information & Mounting Pad Layout**







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