

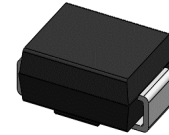
5A,20-60V Schottky Barrier Rectifiers

Features

- Low leakage current
- Schottky barrier diodes
- Low forward voltage drop
- Moisture sensitivity: level 1, per J-STD-020
- Halogen-free according to IEC 61249-2-21 definition
- High temperature soldering guaranteed: 260°C/10 seconds
- AEC-Q101 qualified



RoHS
COMPLIANT



SMB (DO-214AA)

Applications

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

Maximum Ratings & Electrical Characteristics (T _A =25°C unless otherwise noted)							
Parameter	Symbol	ASK52B	ASK53B	ASK54B	ASK55B	ASK56B	Unit
Maximum repetitive 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	I _{F(AV)}	5					A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load per diode	I _{FSM}	120					A
Operating junction temperature range	T _J	-55 to +150					°C
Storage temperature range	T _{STG}	-55 to +150					°C

Thermal-Mechanical Specifications (T _A =25°C unless otherwise noted)			
Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Ambient	R _{θJA}	85	°C/W
Thermal Resistance, Junction to Case	R _{θJC}	15	°C/W
Thermal Resistance, Junction to Lead	R _{θJL}	20	°C/W



Electrical Specifications ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Conditions	ASK52B	ASK53B	ASK54B	ASK55B	ASK56B	Unit
Forward Drop Voltage	V_F	$I_F=5\text{A}$	0.55			0.67		V
Reverse leakage current @ V_R	I_R	$T_J=25^{\circ}\text{C}$	0.20			0.15		mA
		$T_J=125^{\circ}\text{C}$	15					
Typical junction capacitance	C_J	4.0 V 1 MHz	96					pF

Note:

1. Mounted on copper pad area of 0.2x0.2" (5.0 x 5.0mm) to each terminal.

Ratings and Characteristics Curves

($T_A = 25^\circ\text{C}$ unless otherwise noted)

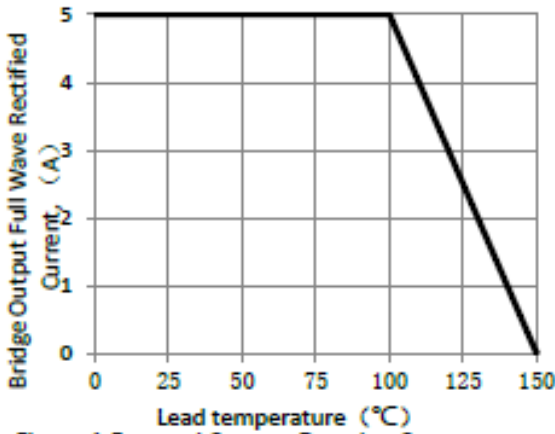


Figure 1. Forward Current Derating Curve

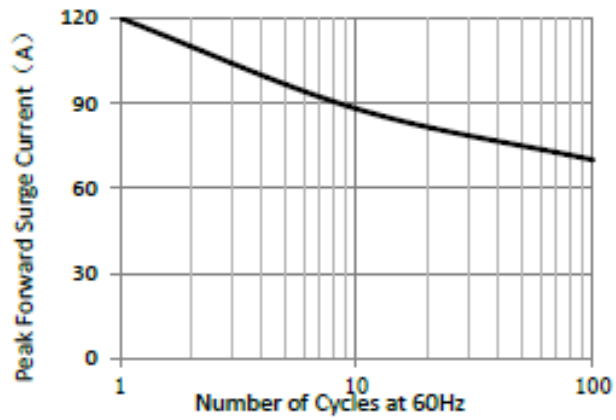


Figure 2. Maximum Non-Repetitive Peak Forward Surge

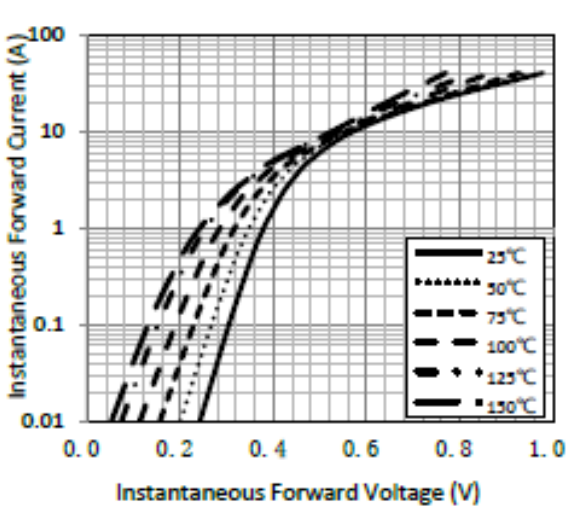


Figure 3. Typical Instantaneous Forward Characteristics (ASK52B thru ASK54B)

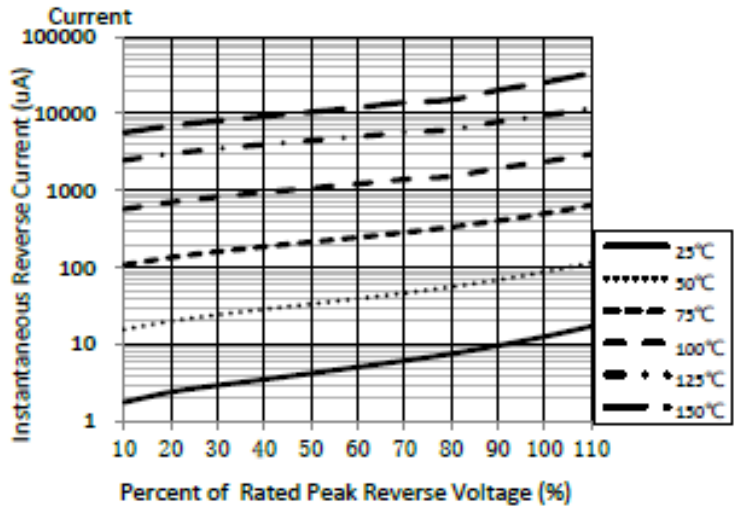


Figure 4. Typical Reverse Characteristics (ASK52B thru ASK54B)

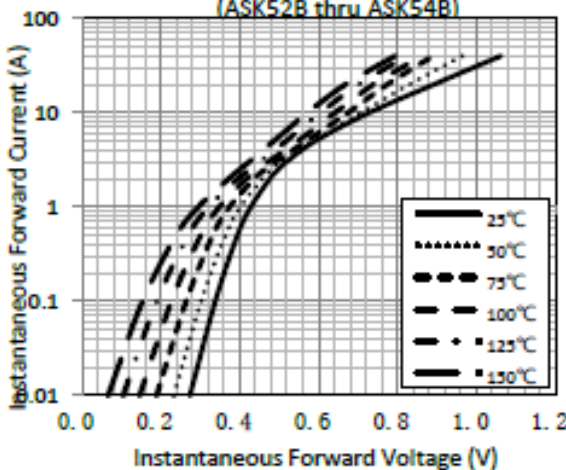


Figure 5. Typical Instantaneous Forward Characteristics (ASK55B thru ASK56B)

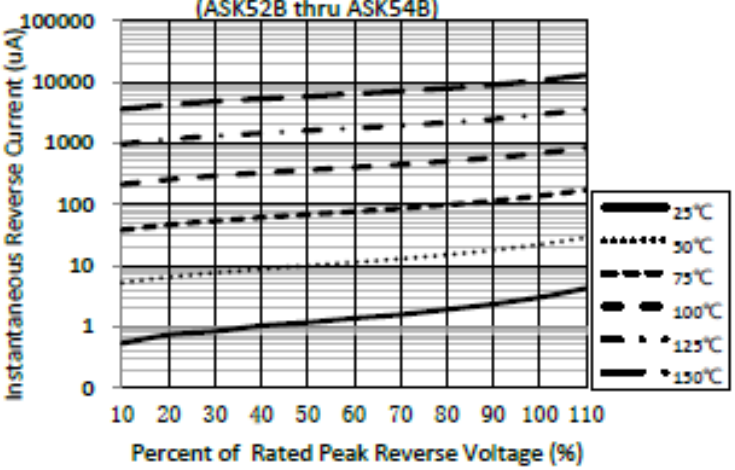
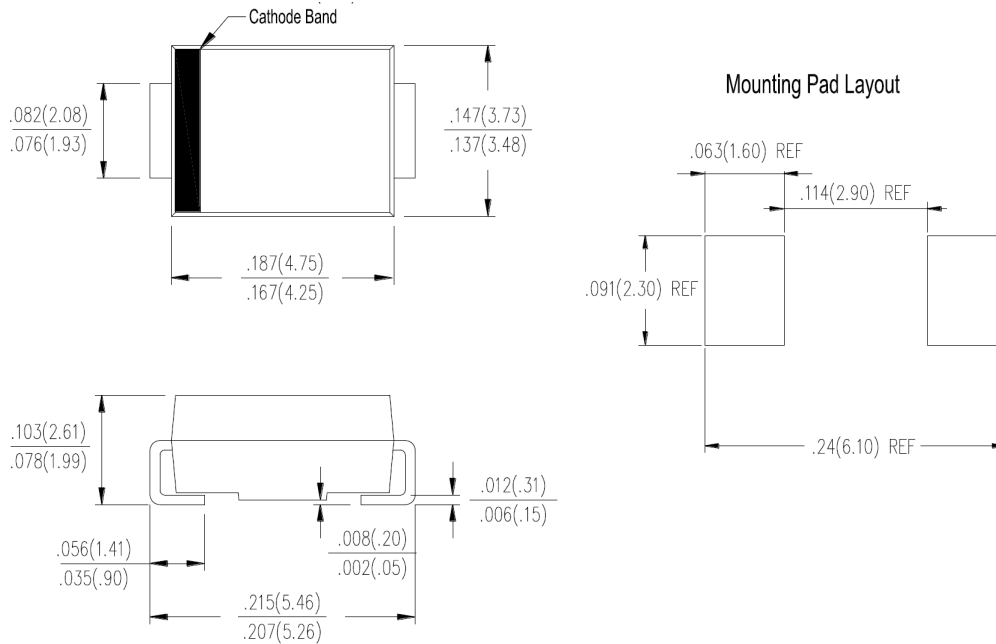


Figure 6. Typical Reverse Characteristics (ASK55B thru ASK56B)

Package Outline Dimensions

in inches (millimeters)

SMB (DO-214AA)



Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.06.01	Released Datasheet
Rev.B	2023.11.30	Modify document format

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