

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



SMC (DO-214AB)

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	ASK52	ASK53	ASK54	ASK55	ASK56	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}	65	°C/W
Thermal Resistance, Junction to Case	R _{θJC}	10	°C/W
Thermal Resistance, Junction to Lead	R _{θJL}	15	°C/W

Electrical Specifications (T_A=25°C unless otherwise noted)

Parameter	Symbol	Test Conditions	ASK52	ASK53	ASK54	ASK55	ASK56	Unit
Forward Drop Voltage	V _F	I _F =5A	0.55			0.67		V
Reverse leakage current @V _R	I _R	T _J =25°C	0.20			0.15		mA
		T _J =125°C	15					
Typical junction capacitance	C _J	4.0 V 1 MHz	96				pF	

Note:

1. Mounted on copper pad area of 8.0 x 8.0mm to each terminal.

Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

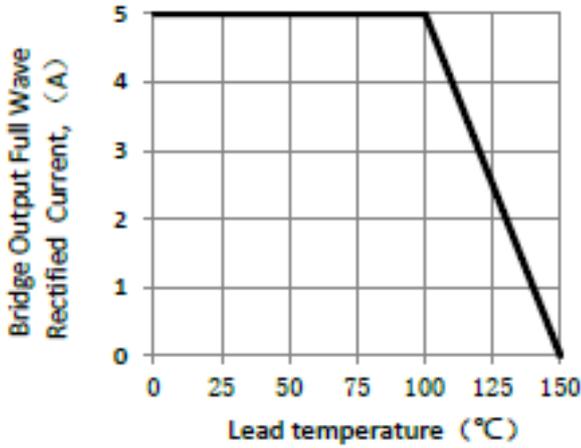


Figure 1. Forward Current Derating Curve

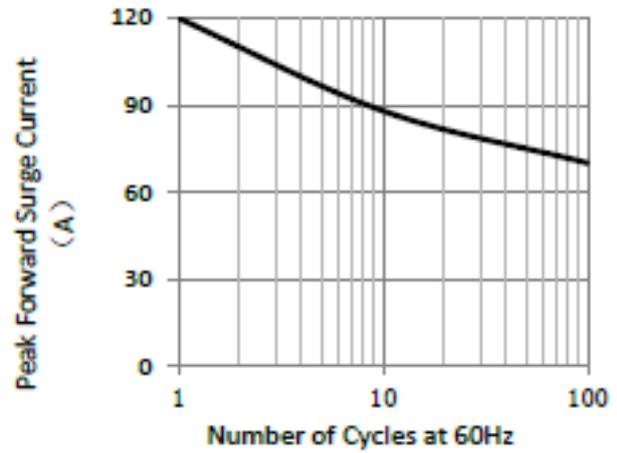


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

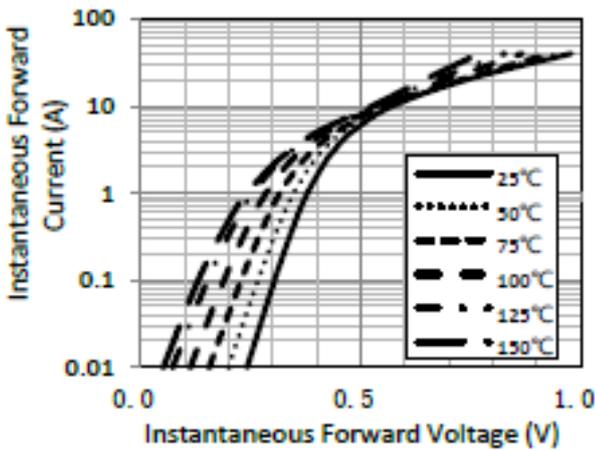


Figure 3. Typical Instantaneous Forward Characteristics (ASK52 thru ASK54)

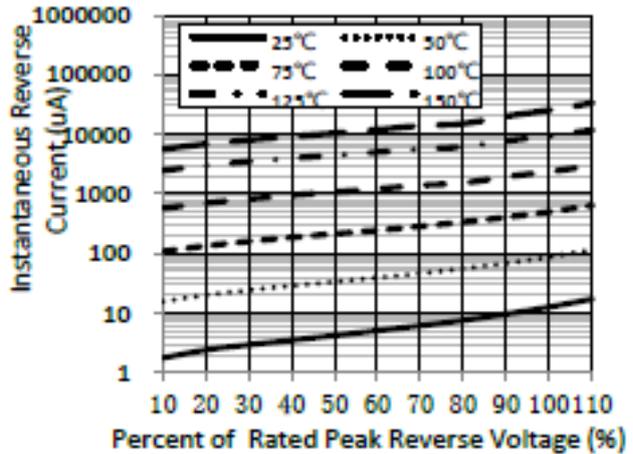


Figure 4. Typical Reverse Characteristics (ASK52 thru ASK54)

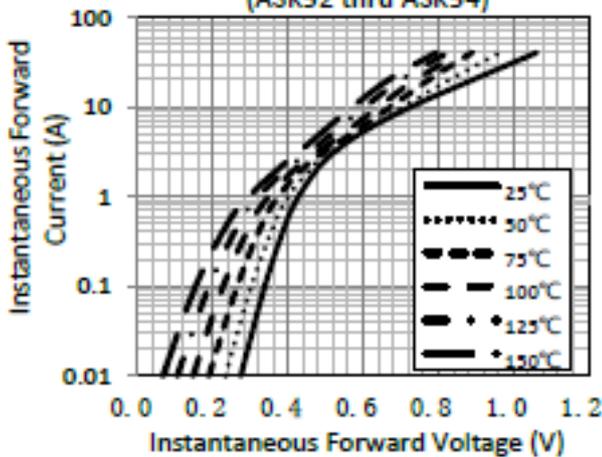


Figure 5. Typical Instantaneous Forward Characteristics (ASK55 thru ASK56)

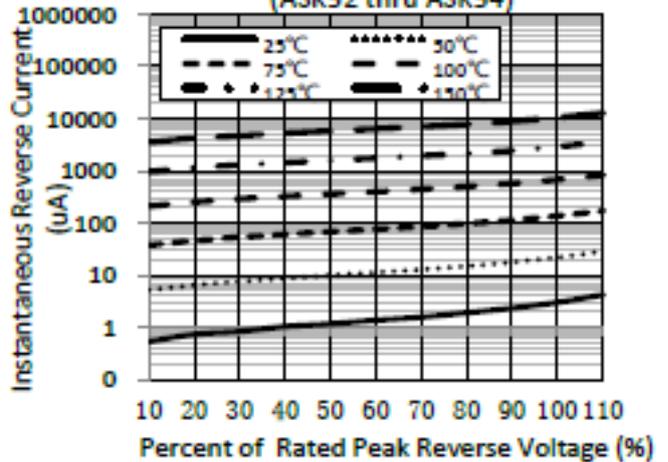
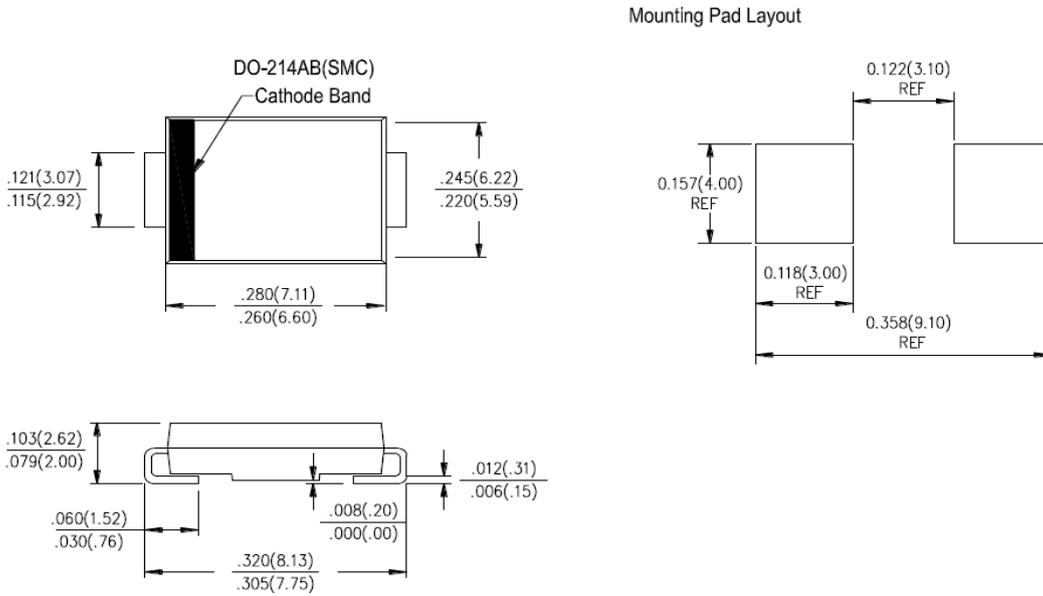


Figure 6. Typical Reverse Characteristics (ASK55 thru ASK56)

Package Outline Dimensions

in inches (millimeters)

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Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.06.01	Released Datasheet
Rev.B	2023.10.24	Modify document format

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