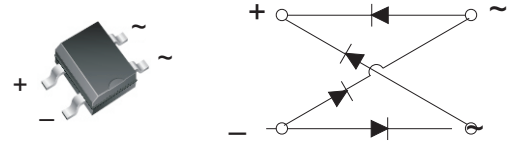




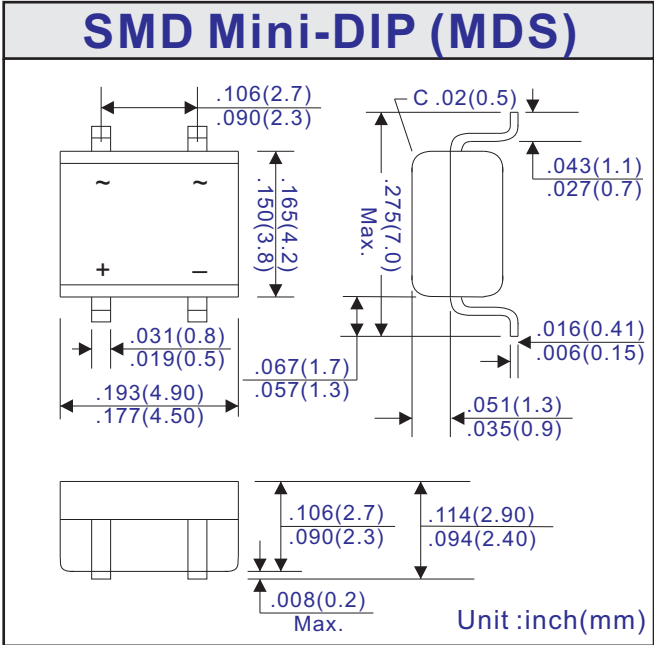
**MDS12 thru  
 MDS110**

**1.0A Surface Mount Schottky  
 Barrier Bridge Rectifiers - 20V-100V**



- FEATURES**
- Schottky barrier chips in MDS bridge
  - Metal-Semiconductor junction with guard ring
  - Highsurge current capability
  - Silicon epitaxial planar chips
  - For use in low voltage, high efficiency inverters, free wheeling, and polarity protection applications
  - Lead-free part, meet RoHS requirements

- MECHANICAL DATA**
- Case: Mini-Dip bridge (TO-269AA) plastic molded case
  - Epoxy: UL94-V0 rated flame retardant
  - Terminals: Solderable per MIL-STD-750 Method 2026
  - Polarity: As marked on body
  - Mounting Position: Any
  - Weight: 0.0078 ounces, 0.22 grams



**MAXIMUM RATING AND ELECTRICAL CHARACTERISTICS**  
 Ratings at 25°C ambient temperature unless otherwise specified

MDS -	Symbols	12	14	16	18	110	Units
Maximum Recurrent Peak Reverse Voltage	VRRM	20	40	60	80	100	Volts
Maximum RMS Voltage	VRMS	14	28	42	56	70	Volts
Maximum DC Blocking Voltage	VDC	20	40	60	80	100	Volts
Maximum Average Forward Rectified Current 0.2x0.2" (5.0x5.0mm) copper pad area, see Figure 1	I <sub>AV</sub>	1.0					Amps
Peak Forward Surge Current 8.3mS single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	30.0					Amps
Maximum Forward Voltage at 1.0A (Note 1)	V <sub>F</sub>	0.55	0.75	0.90		Volts	
Maximum DC Reverse Current at Rated DC Blocking Voltage	I <sub>R</sub>	0.5 20.0					mA
Typical Junction Capacitance (Note 2)	C <sub>J</sub>	250			125		pF
Typical Thermal Resistance (Note 3)	R <sub>θJA</sub> R <sub>θJL</sub>	85.0 20.0					°C/W
Operating Junction Temperature Range	T <sub>J</sub>	-55 ~ +125					°C
Storage Temperature Range	T <sub>STG</sub>	-55 ~ +150					°C

Note 1. Pulse test: 300µS pulse width, 1% duty cycle  
 2. Measured at 1.0MHz and applied reverse voltage of 4.0 Volts  
 3. Thermal resistance from junction to ambient and from junction to lead P.C.B. mounted on 0.2x0.2"(5.0x5.0mm) copper pad areas.



Fig. 1 - Forward Current Derating Curve

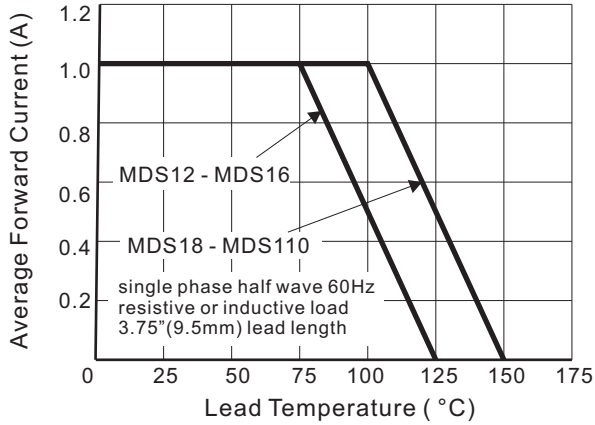


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

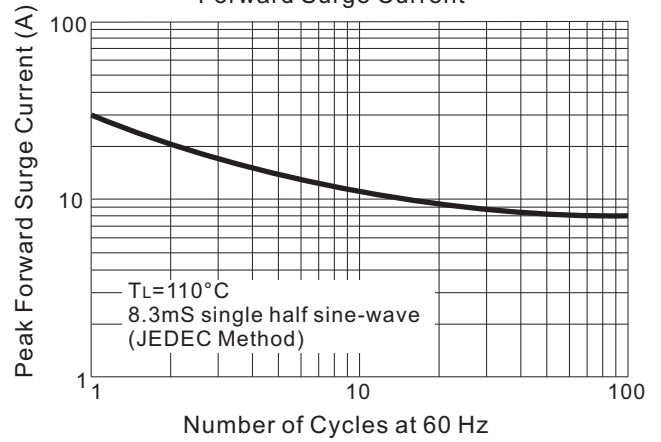


Fig. 3 - Typical Instantaneous Forward Characteristics

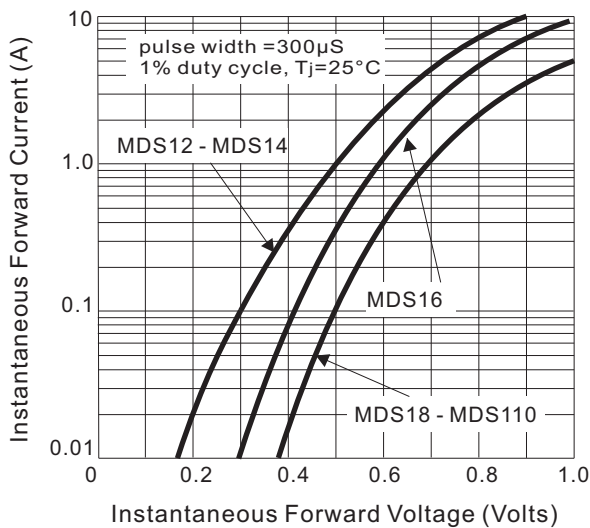


Fig. 4A - Typical Reverse Characteristics

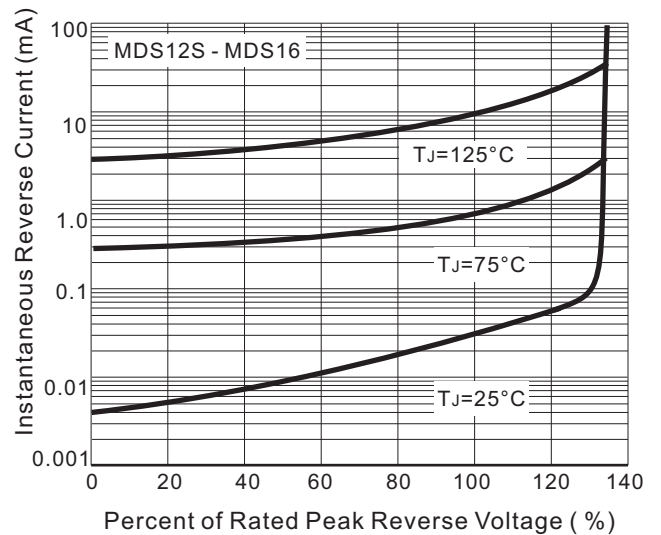


Fig. 5 - Typical Junction Capacitance

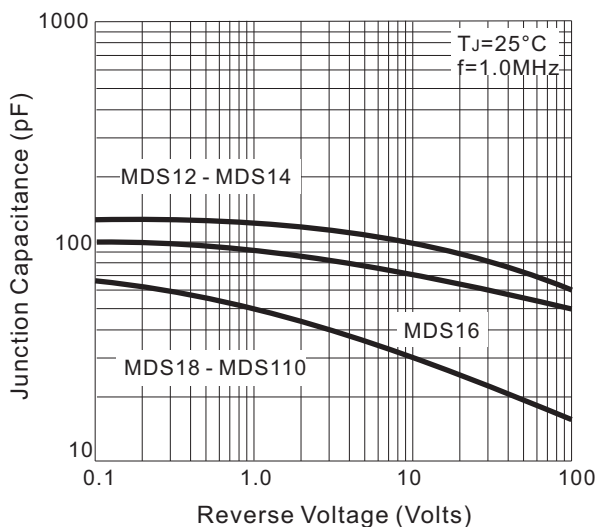


Fig. 4B - Typical Reverse Characteristic

