

MS14~MS120

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

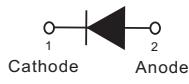
VOLTAGE 40 to 200 Volt **CURRENT** 1 Ampere

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- For surface mounted applications in order to optimize board space
- Metal to silicon rectifier, majority carrier conduction
- Low power loss, high efficiency
- High surge capacity
- High current capacity, low V_F
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

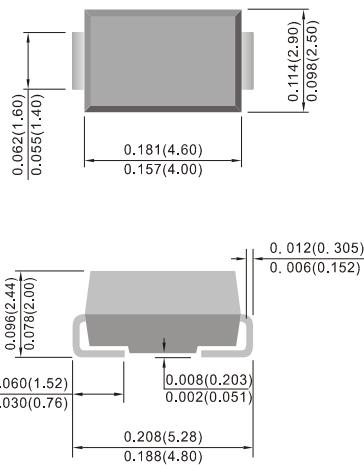
MECHANICAL DATA

- Case: JEDEC DO-214AC molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Standard packaging: 12mm tape (EIA-481)
- Weight: 0.0023 ounces, 0.0679 grams



SMA / DO-214AC

Unit : inch(mm)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.

PARAMETER	SYMBOL	MS14	MS14A	MS15	MS16	MS18	MS19	MS110	MS115	MS120	UNITS						
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	40	45	50	60	80	90	100	150	200	V						
Maximum RMS Voltage	V_{RMS}	28	31.5	35	42	56	63	70	105	140	V						
Maximum DC Blocking Voltage	V_{DC}	40	45	50	60	80	90	100	150	200	V						
Maximum Average Forward Current (See Figure 1)	$I_{F(AV)}$	1								A							
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	30								A							
Maximum Forward Voltage at 1A (Notes 1)	V_F	0.7		0.74		0.8		0.9		V							
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_J=25^\circ C$	I_R	1								0.5							
Typical DC Reverse Current at Rated DC Blocking Voltage $T_J=125^\circ C$		0.3		0.2		0.02		mA									
Typical Thermal Resistance (Notes 2)	$R_{\theta JL}$ $R_{\theta JA}$	30 95								°C / W							
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to $+150$	-65 to +175								°C						

NOTES :

1. Pulse Test with PW = 300μsec, 1% Duty Cycle.
2. Mounted on P.C. Board with 5mm² (0.013mm thick) copper pad areas.

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RATING AND CHARACTERISTIC CURVES

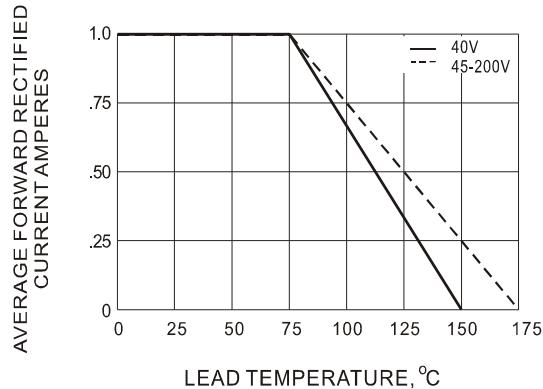


Fig.1 FORWARD CURRENT DERATING CURVE

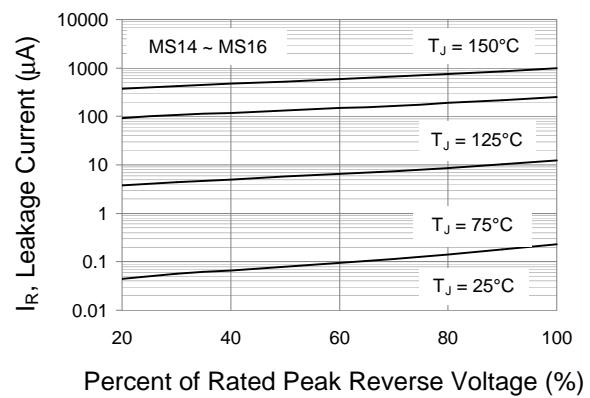


Fig.2 Typical Reverse Characteristics

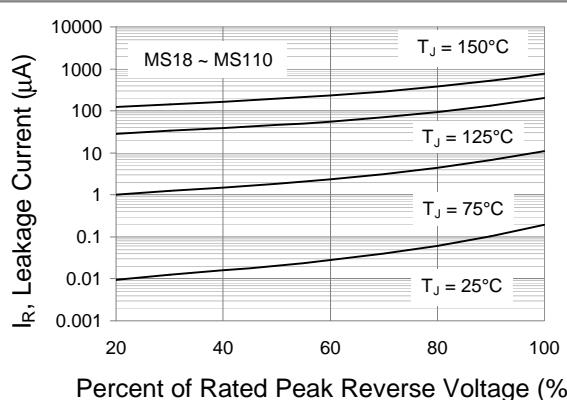


Fig.3 Typical Reverse Characteristics

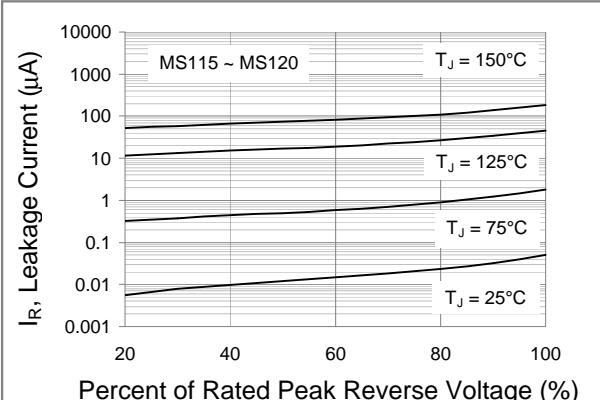


Fig.4 Typical Reverse Characteristics

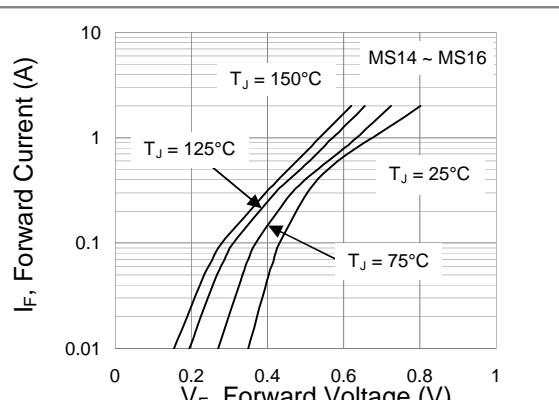


Fig.5 Typical Forward Characteristics

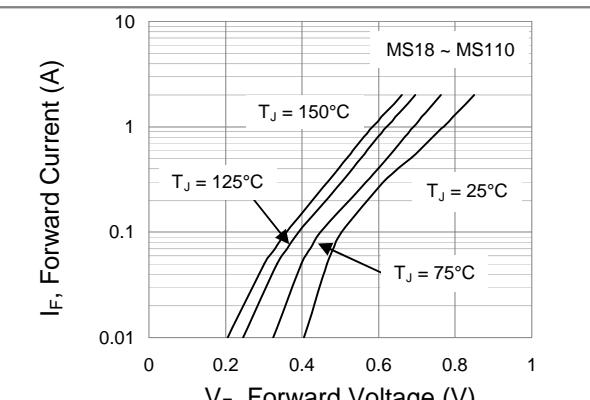


Fig.6 Typical Forward Characteristics

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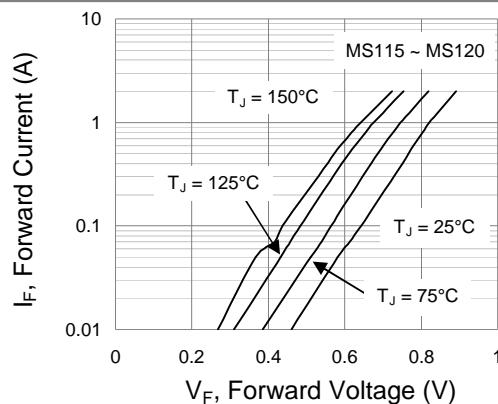


Fig.7 Typical Forward Characteristics

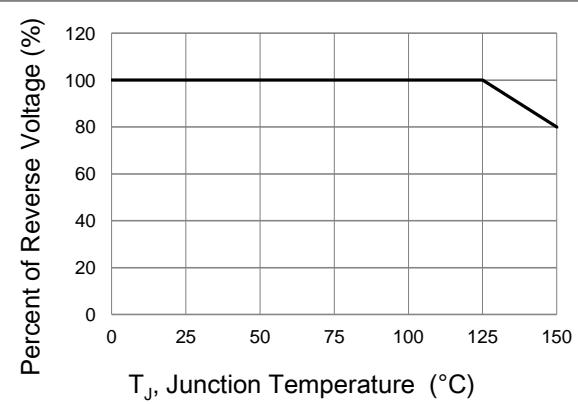


Fig.8 Operating Temperature Derating Curve

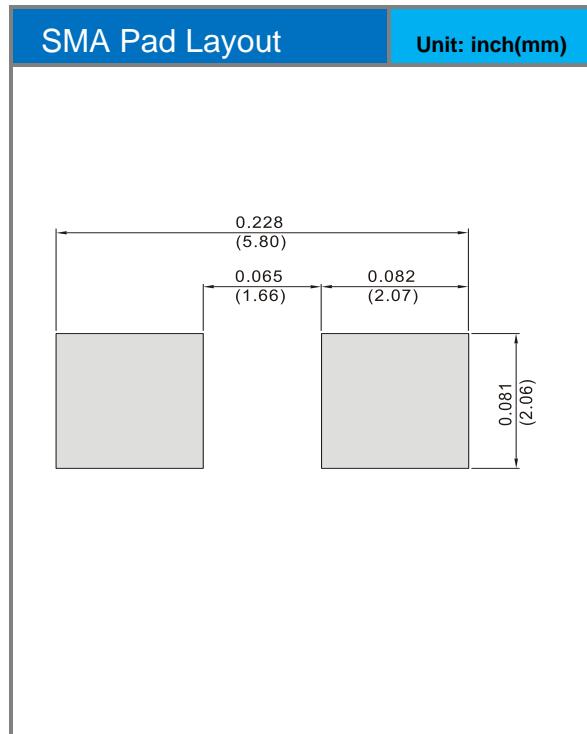
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Product and Packing Information

Part No.	Package Type	Packing Type	Marking
MS14	SMA	1.8K pcs / 7" reel	MS14
MS14	SMA	7.5K pcs / 13" reel	MS14
MS14A	SMA	1.8K pcs / 7" reel	MS14A
MS14A	SMA	7.5K pcs / 13" reel	MS14A
MS15	SMA	1.8K pcs / 7" reel	MS15
MS15	SMA	7.5K pcs / 13" reel	MS15
MS16	SMA	1.8K pcs / 7" reel	MS16
MS16	SMA	7.5K pcs / 13" reel	MS16
MS18	SMA	1.8K pcs / 7" reel	MS18
MS18	SMA	7.5K pcs / 13" reel	MS18
MS19	SMA	1.8K pcs / 7" reel	MS19
MS19	SMA	7.5K pcs / 13" reel	MS19
MS110	SMA	1.8K pcs / 7" reel	MS110
MS110	SMA	7.5K pcs / 13" reel	MS110
MS115	SMA	1.8K pcs / 7" reel	MS115
MS115	SMA	7.5K pcs / 13" reel	MS115
MS120	SMA	1.8K pcs / 7" reel	MS120
MS120	SMA	7.5K pcs / 13" reel	MS120

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Mounting Pad Layout



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