

**5A SCHOTTKY BARRIER RECTIFIER**

**Reverse Voltage 150 to 200 Volts Forward Current 5.0 Amperes**

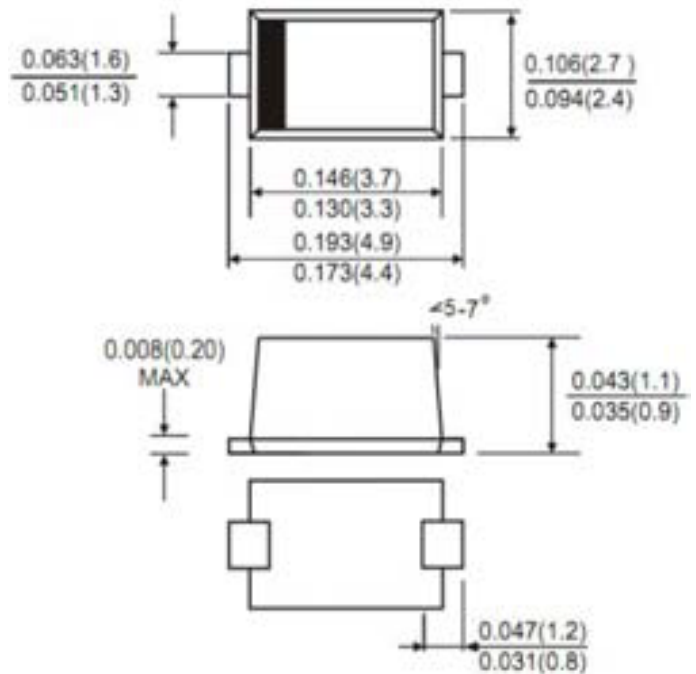
**Features**

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Low power loss,high efficiency
- For use in low voltage high frequency inverters, free wheeling,and polarity protection applications
- Guardring for over voltage protection
- High temperature soldering guaranteed: 260°C/10 seconds at terminals

**Mechanical Data**

- **Case:** JEDEC SMA-FL molded plastic over glass die
- **Terminals:** Plated leads, solderable per MIL-STD-750, Method 2026
- **Polarity:** Color band denotes cathode end
- **Mounting Position :** Any
- **Weight:** 28mg
- **Handling precautin:** None

**SMA-FL**



**1.Electrical Characteristic**

**Maximum& Thermal Characteristics Ratings (25°C ambient temperature unless otherwise specified.)**

Parameter	symbol	SM5150AF	SM5200AF	Unit
device marking code		S515	S520	
Maximum repetitive peak reverse voltage	$V_{RRM}$	150	200	V
Maximum RMS voltage	$V_{RMS}$	105	140	V
Maximum DC blocking voltage	$V_{DC}$	150	200	V
Maximum average forward rectified current lead length (See fig. 1) at TC = 75°C	$I_{F(AV)}$	5.0		A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	120		A
Typical thermal resistance (Note 1)	$R\theta_{JA}$	150		°C/W
	$R\theta_{JL}$	35		
Operating junction and storage temperature range	$T_J, T_{STG}$	-40 to +150		°C

**Electrical Characteristics Ratings (25°C ambient temperature unless otherwise specified.)**

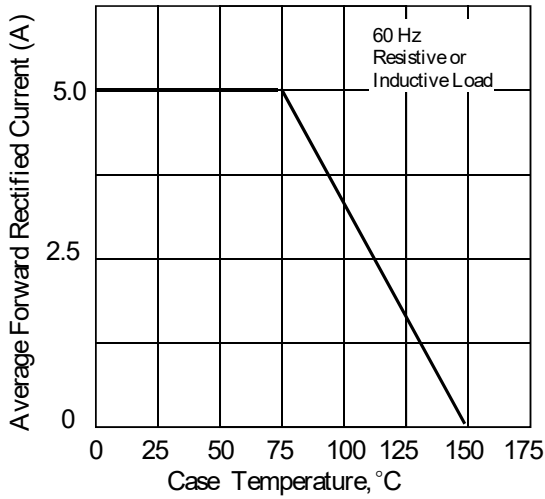
Parameter	symbol	SM5150AF	SM5200AF	Unit
Maximum instantaneous forward voltage at 5.0A	$V_F$	0.87		V
Maximum DC reverse current TA = 25°C at rated DC blocking voltage TJ = 100°C	IR	0.1	30.0	mA
Typical junction capacitance at 4.0V, 1MHz	CJ	110		PF

NOTES:

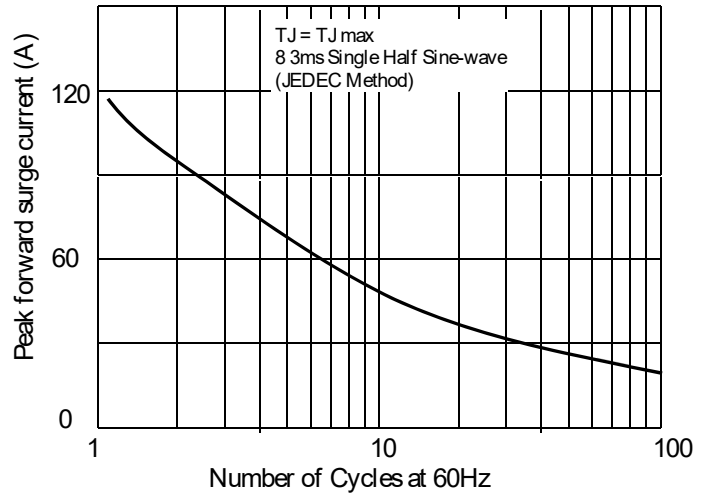
1. 8.0mm<sup>2</sup> (.013mm thick) land areas

## 2. Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted )

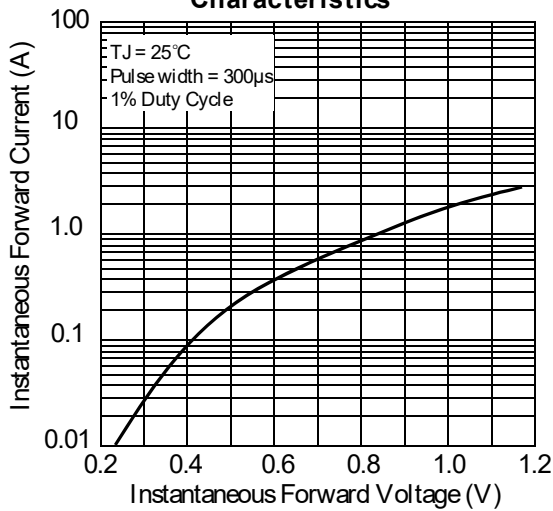
**Fig. 1– Forward Current Derating Curve**



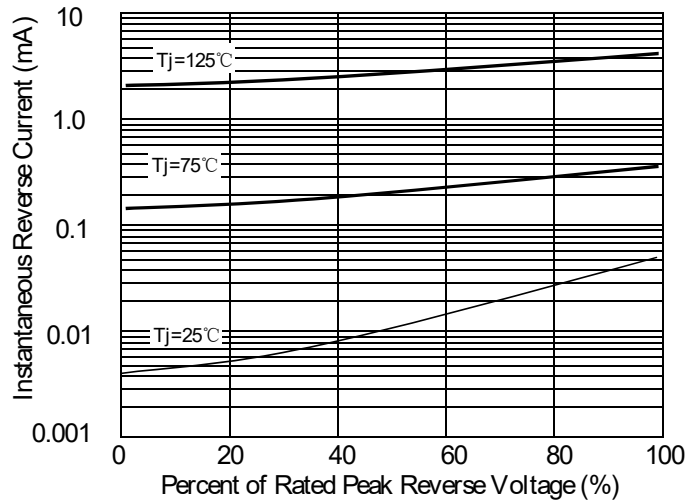
**Fig. 2– Maximum Non-repetitive Peak Forward Surge Current**



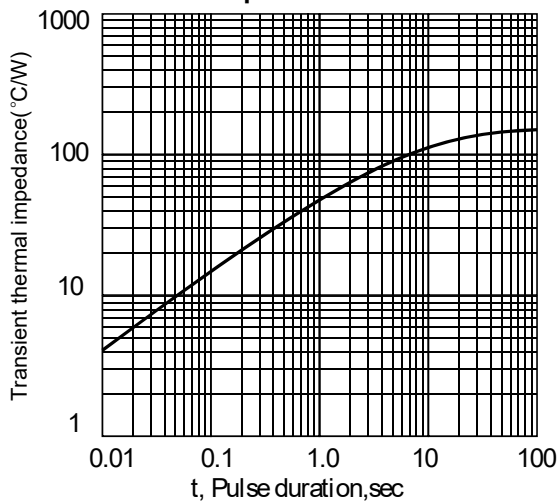
**Fig 3.– Typical Instantaneous Forward Characteristics**



**Fig 4.– Typical Reverse Characteristics**



**Fig 5.– typical transient thermal impedance**



**Fig 6.– Typical Junction Capacitance**

