

## **SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER**

**VOLTAGE RANGE 20 to 200 Volts CURRENT 5.0 Ampere**

### **FEATURES**

- \* Ideal for surface mounted applications
- \* Low leakage current
- \*
- \* Mounting position: Any
- \* Weight: 0.24 gram

### **MECHANICAL DATA**

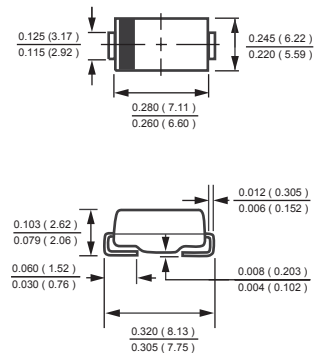
- \* Epoxy: Device has UL flammability classification 94V-O

### **MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified.  
Resistive or inductive load.



**DO-214AB**



Dimensions in inches and (millimeters)

#### **MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)**

RATINGS	SYMBOL	FM520	FM530	FM540	FM550	FM560	FM580	FM5100	FM5150	FM5200	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	50	60	80	100	150	200	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	14	21	28	35	42	56	70	105	140	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	20	30	40	50	60	80	100	150	200	Volts
Maximum Average Forward Rectified Current at Ambient Temperature	I <sub>O</sub>	5.0									Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	150									Amps
Typical Current Square Time	I <sup>2</sup> T	93.3									A <sup>2</sup> S
Typical Thermal Resistance (Note 1)	R <sub>θJA</sub>	55									°C/W
	R <sub>θJL</sub>	17									
Typical Junction Capacitance (Note 2)	C <sub>J</sub>	200									pF
Operating Temperature Range	T <sub>J</sub>	150									°C
Storage Temperature Range	T <sub>STG</sub>	-55 to + 150									°C

#### **ELECTRICAL CHARACTERISTICS (@TA=25 °C unless otherwise noted)**

CHARACTERISTICS		SYMBOL	FM520	FM530	FM540	FM550	FM560	FM580	FM5100	FM5150	FM5200	UNITS
Maximum Instantaneous Forward Voltage at 5.0A DC		V <sub>F</sub>	.55			.75		.85				Volts
Maximum Average Reverse Current at Rated DC Blocking Voltage	@T <sub>A</sub> = 25°C	I <sub>R</sub>	0.2									mA
	@T <sub>A</sub> = 100°C		2									mA

NOTES : 1. Thermal Resistance : Mounted on PCB.  
 2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.  
 3. "Fully ROHS compliant", "100% Sn plating (Pb-free)".

2009-10  
REV: A

## RATING AND CHARACTERISTICS CURVES ( FM520 THRU FM5200 )

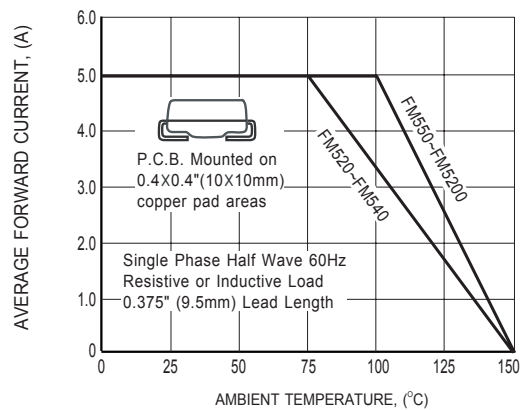


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

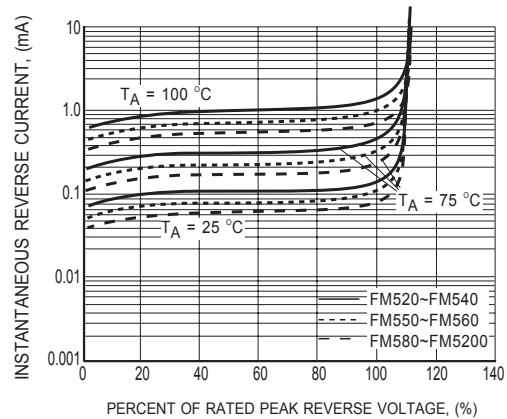


FIG.2 TYPICAL REVERSE CHARACTERISTICS

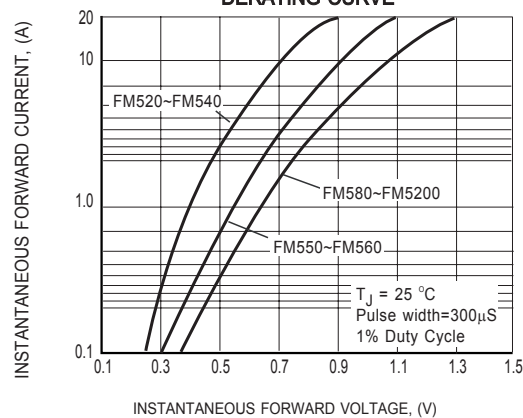


FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

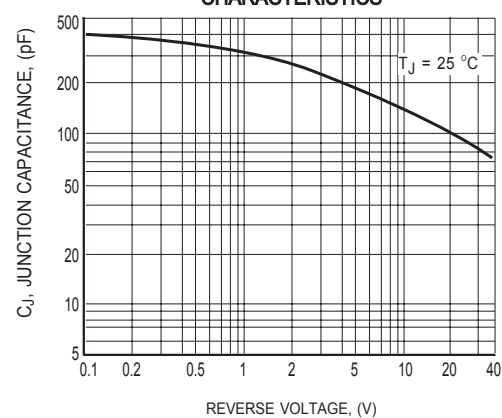


FIG.4 TYPICAL JUNCTION CAPACITANCE

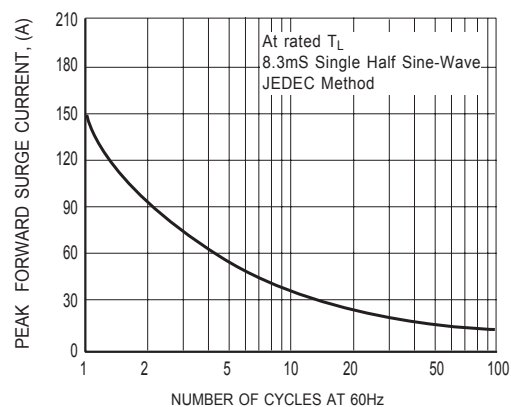
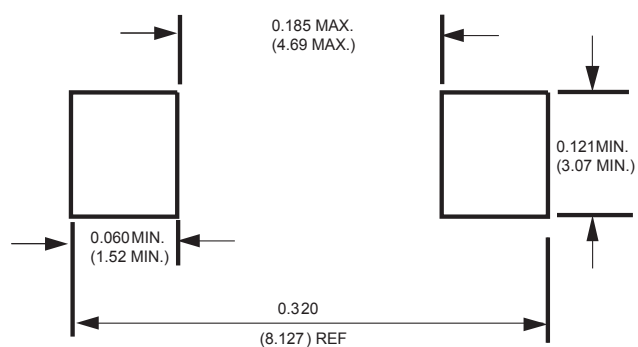


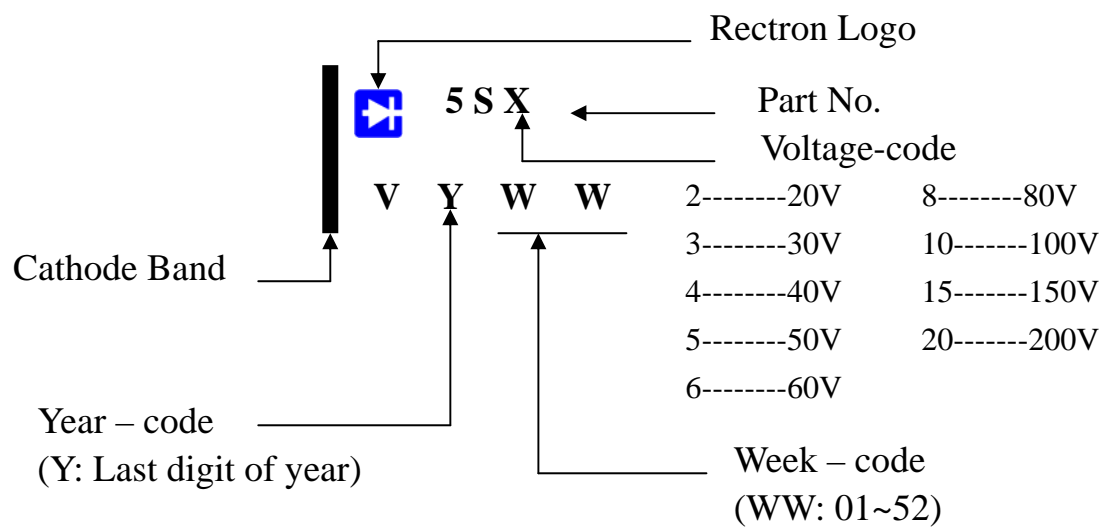
FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

## Mounting Pad Layout



Dimensions in inches and (millimeters)

## Marking Description



## PACKAGING OF DIODE AND BRIDGE RECTIFIERS

### REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	COMPONENT SPACE(mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
SMC	-T	500	---	---	176	390*205*310	12,000	6.65
SMC	-W	3,000	---	---	330	355*360*350	24,000	11.50

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