



**DC COMPONENTS CO., LTD.**

RECTIFIER SPECIALISTS

**SM120M  
THRU  
SM160M**

**TECHNICAL SPECIFICATIONS OF SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER**

**VOLTAGE RANGE - 20 to 60 Volts**

**CURRENT - 0.5 Ampere**

**FEATURES**

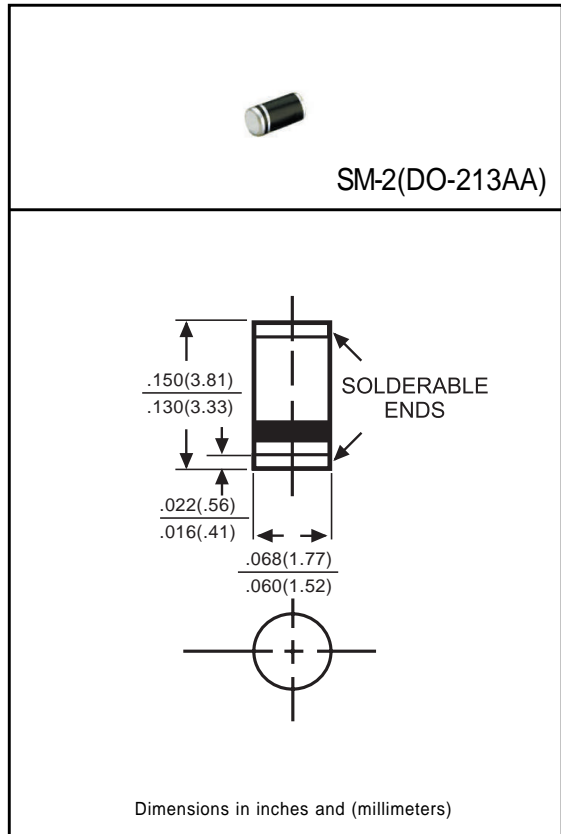
- \* High current capability
- \* Ideal for surface mounted applications
- \* Low leakage current for high efficiency

**MECHANICAL DATA**

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Solder plated solderable per MIL-STD-202E, Method 208 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 0.036 gram

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified.  
Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.



	SYMBOL	SM120M	SM130M	SM140M	SM150M	SM160M	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	50	60	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	14	21	28	35	42	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	20	30	40	50	60	Volts
Maximum Average Forward Rectified Current at T <sub>A</sub> =90°C	I <sub>O</sub>	0.5					Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	25					Amps
Maximum Instantaneous Forward Voltage at 0.5A DC	V <sub>F</sub>	.45	.55	.60	.75		
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ T <sub>A</sub> = 25°C	1.0					mAmps
	@ T <sub>A</sub> = 100°C	10					
Typical Thermal Resistance (Note1)	R <sub>θJA</sub>	75					°C/W
Typical Junction Capacitance (Note 2)	C <sub>J</sub>	110					pF
Storage Operating Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to + 125					°C

NOTES : 1. Thermal Resistance (Junction to Ambient), .24in<sub>2</sub> (6.0mm<sub>2</sub>) copper pads to each terminal.  
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

RATING AND CHARACTERISTIC CURVES ( SM120M THRU SM160M )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

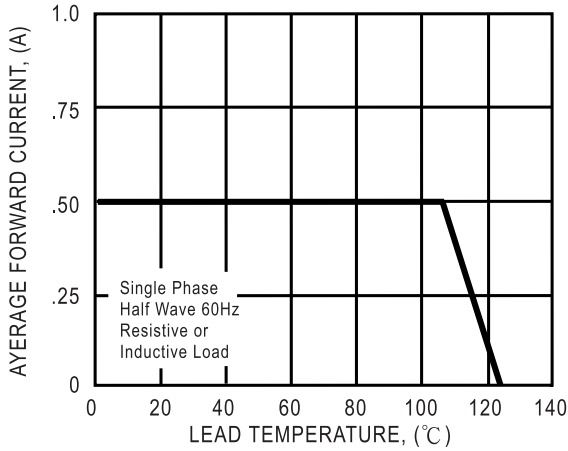


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

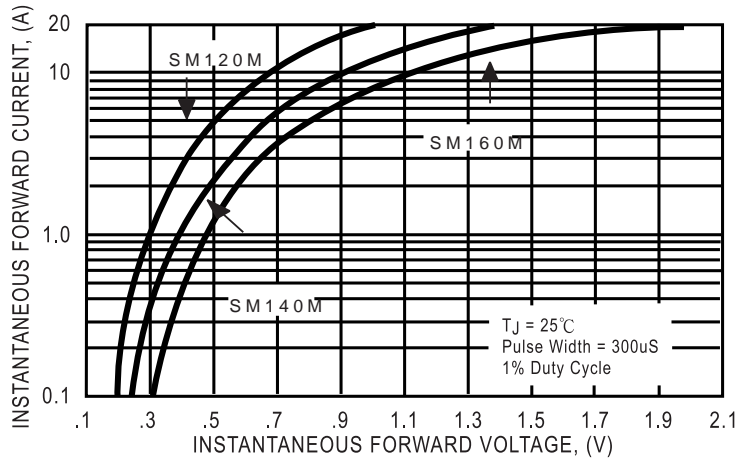


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

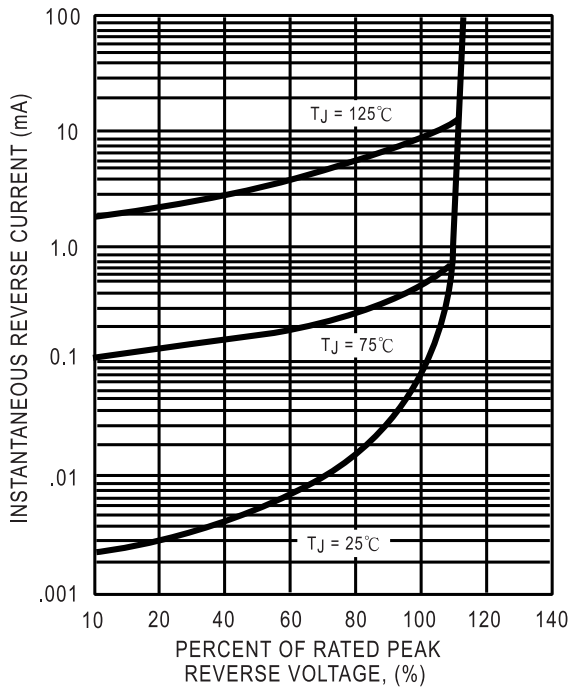


FIG. 4 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

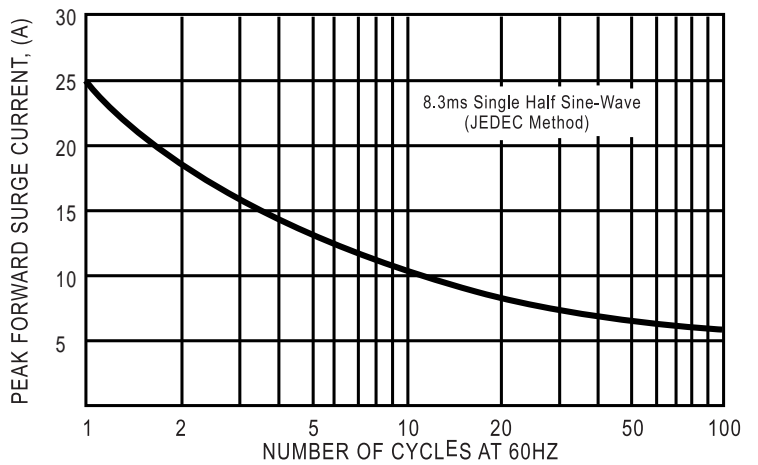
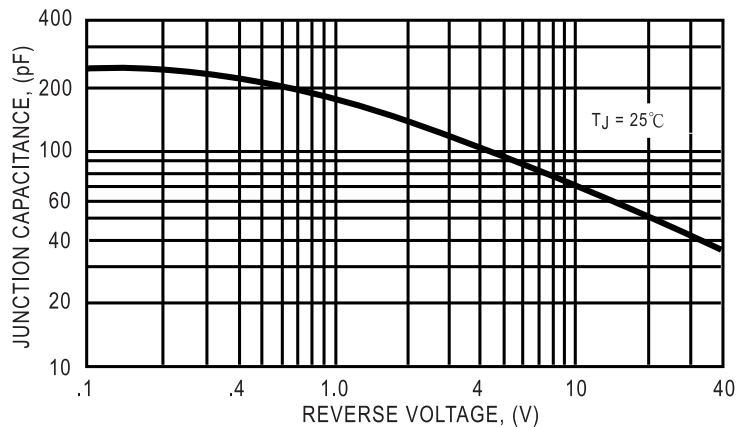


FIG. 5 - TYPICAL JUNCTION CAPACITANCE



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