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*

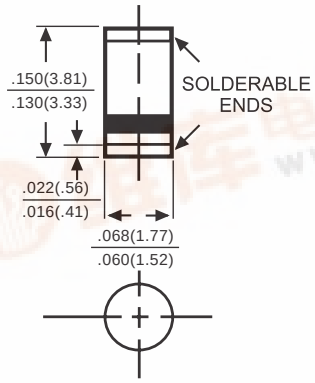
FEATURES

* 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

SM-2(DO-213AA)



Dimensions in inches and (millimeters)

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_{RRM}	20	30	40	50	60	Volts
Maximum RMS Voltage		V_{RMS}	14	21	28	35	42	Volts
Maximum DC Blocking Voltage		V_{DC}	20	30	40	50	60	Volts
Maximum Average Forward Rectified Current at T_A=90°C		I_O	0.5					Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)		I_{FSM}	25					Amps
Maximum Instantaneous Forward Voltage at 0.5A DC		V_F	.45	.55	.60	.75		
Maximum DC Reverse Current at Rated DC Blocking Voltage	@T_A = 25°C	I_R	1.0					mAmps
	@T_A = 100°C		10					
Typical Thermal Resistance (Note1)		$R\theta_{JA}$	75					°C/W
Typical Junction Capacitance (Note 2)		C_J	110					pF
Storage Operating Temperature Range		T_J, T_{STG}	-65 to + 125					°C

NOTES : 1. Thermal Resistance (Junction to Ambient), .24in² (6.0mm²) 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

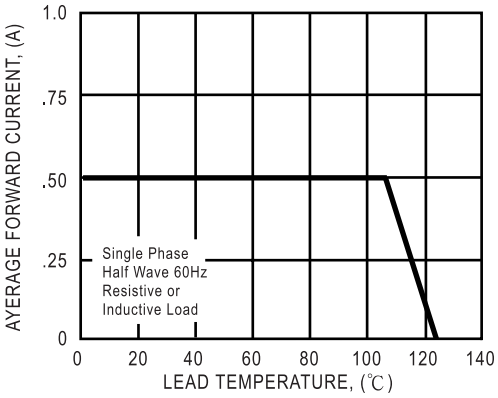


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARCTERISTICS

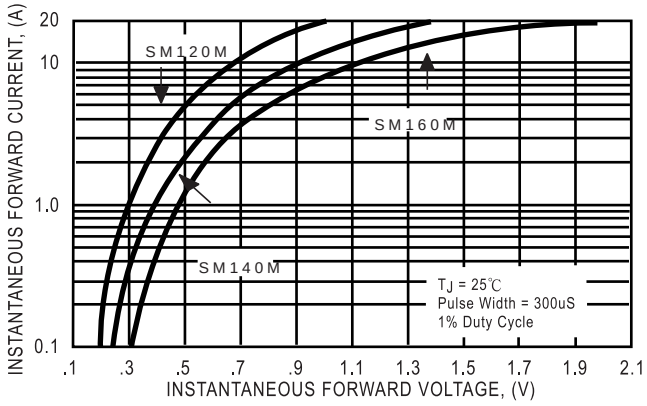


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

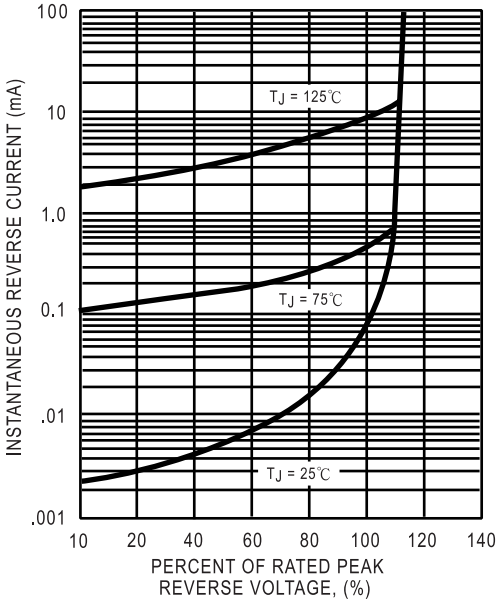


FIG. 4 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

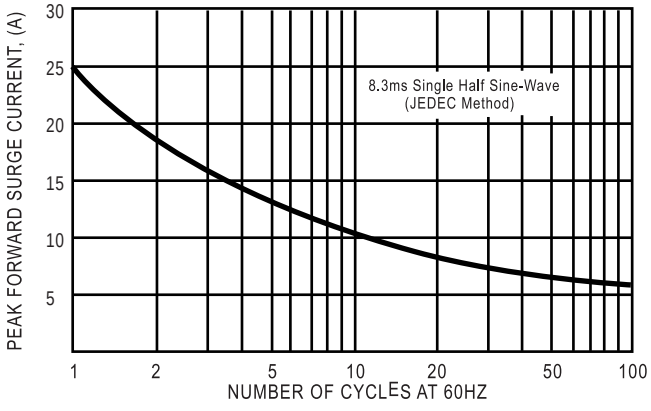


FIG. 5 - TYPICAL JUNCTION CAPACITANCE