

SURFACE MOUNT
GLASS PASSIVATED SILICON RECTIFIER
VOLTAGE RANGE 50 to 1000 Volts CURRENT 5.0 Amperes

FEATURES

- * Glass passivated device
- * Ideal for surface mounted applications
- * Low leakage current
- * Metallurgically bonded construction
- * Mounting position: Any
- * Weight: 0.24 gram

MECHANICAL DATA

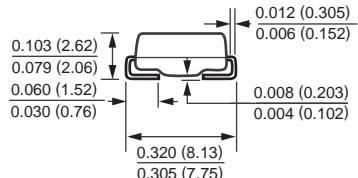
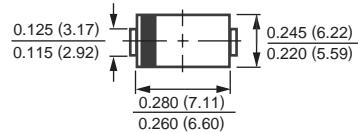
- * Epoxy : Device has UL flammability classification 94V-0

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%.



DO-214AB



Dimensions in inches and (millimeters)

MAXIMUM RATINGS (At TA = 25°C unless otherwise noted)

RATINGS	SYMBOL	FM501	FM502	FM503	FM504	FM505	FM506	FM507	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V _{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current TA = 50°C	I _O				5.0				Amps
Peak Forward Surge Current I _{FM(surge)} : 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}				150				Amps
Typical Thermal Resistance	(Note 2) R _{θJL}				10				°C/W
	(Note 3) R _{θJA}				35				°C/W
Typical Junction Capacitance (Note 1)	C _J				60				pF
Operating and Storage Temperature Range	T _J , T _{STG}				-65 to + 175				°C

ELECTRICAL CHARACTERISTICS (At TA = 25°C unless otherwise noted)

CHARACTERISTICS	SYMBOL	FM501	FM502	FM503	FM504	FM505	FM506	FM507	UNITS
Maximum Forward Voltage at 5.0A DC	V _F				1.1				Volts
Maximum Full Load Reverse Current, Full cycle Average at TA=75°C	I _R				30				uAmps
Maximum DC Average Reverse Current at Rated DC Blocking Voltage		@ TA = 25°C			5.0				uAmps
		@ TA = 125°C			150				uAmps

NOTES : 1. Measured at 1.0 MHz and applied average voltage of 4.0VDC

2. Thermal resistance junction to terminal, 10.0X10.0mm² copper pads to each terminal.

3. Thermal resistance junction to ambient, 10.0X10.0mm² copper pads to each terminal.

RATING AND CHARACTERISTIC CURVES (FM501 THRU FM507)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

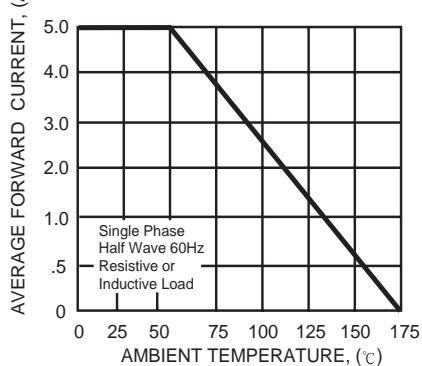


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

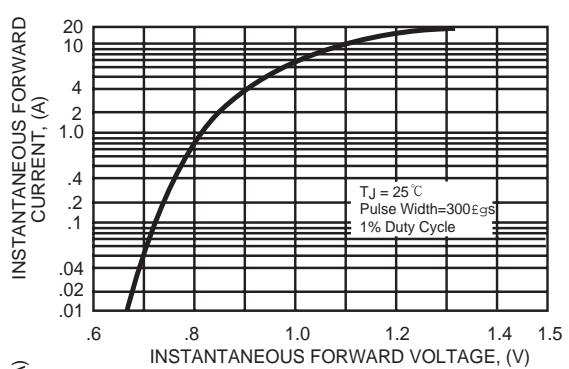


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

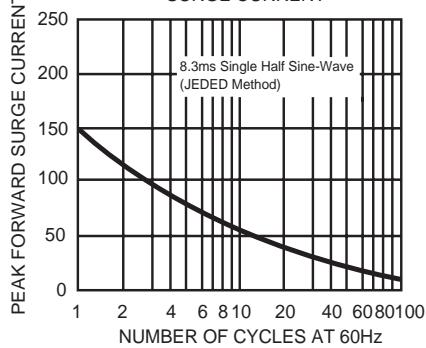


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

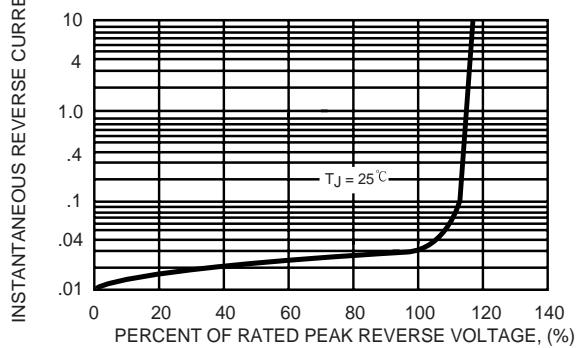


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

