

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE 20 to 40 Volts CURRENT 3.0 Ampere

FEATURES

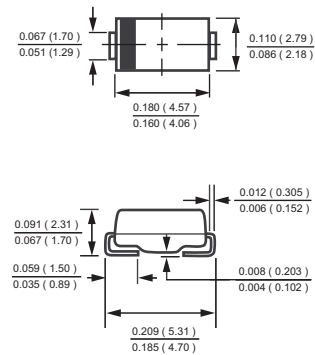
- * Ideal for surface mounted applications
- * Low leakage current
- * Metallurgically bonded construction
- * Mounting position: Any
- * Weight: 0.24 gram

MECHANICAL DATA

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



DO-214AC



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%.

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

RATINGS	SYMBOL	FM5820A	FM5821A	FM5822A	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	20	30	40	Volts
Maximum RMS Voltage	V _{RMS}	14	21	28	Volts
Maximum DC Blocking Voltage	V _{DC}	20	30	40	Volts
Maximum Average Forward Rectified Current at Derating Lead Temperature	I _O	3.0			Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	100			Amps
Typical Current Squared Time	I ² T	41.5			A ² S
Non-repetitive avalanche energy IRRM=1A, PW=2us, f= 1 kHz, Ind. 12mH	E _{AS}	6.0			mJ
Typical Thermal Resistance (Note 3)	R _{θJA}	50			°C/W
	R _{θJL}	14			
Typical Junction Capacitance (Note 1)	C _J	200			pF
Operating Temperature Range	T _J	150			°C
Storage Temperature Range	T _{STG}	-55 to + 150			°C

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

CHARACTERISTICS	SYMBOL	FM5820A	FM5821A	FM5822A	UNITS
Maximum Instantaneous Forward Voltage at 3.0A DC	V _F	.46			Volts
Maximum Average Reverse Current at Rated DC Blocking Voltage	@ T _A = 25°C	80			uAmps
	@ T _A = 125°C	10			mAmps

- NOTES :
1. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
 2. "Fully ROHS compliant", "100% Sn plating (Pb-free)".
 3. Thermal Resistance : Mounted on PCB.
 4. P/N suffix V means AEC-Q101 qualified

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RATING AND CHARACTERISTICS CURVES (FM5820A THRU FM5822A)

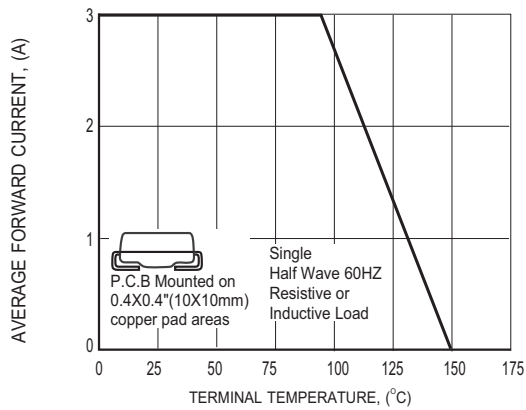


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

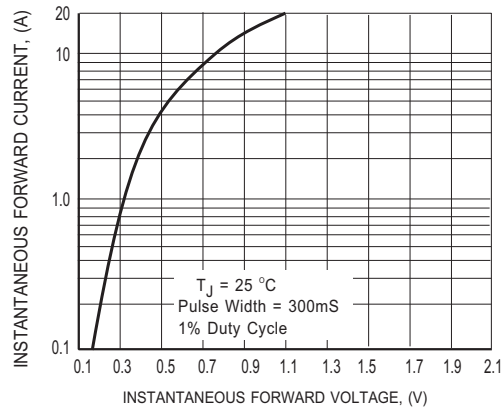


FIG.2 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

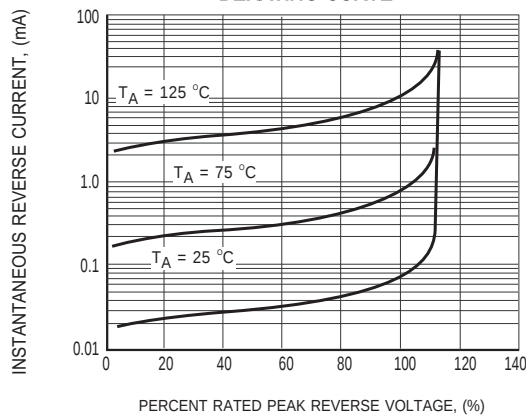


FIG.3 MAXIMUM REVERSE CHARACTERISTICS

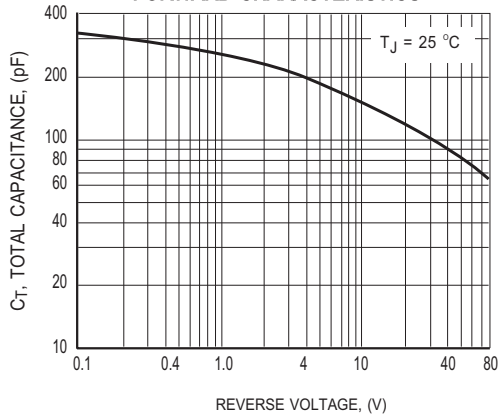


FIG.4 TYPICAL JUNCTION CAPACITANCE

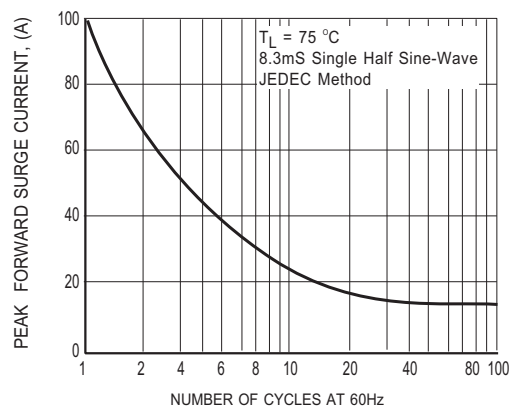
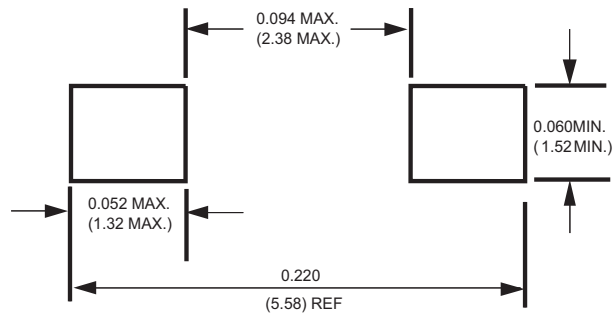


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

Mounting Pad Layout



Dimensions in inches and (millimeters)

PACKAGING OF DIODE AND BRIDGE RECTIFIERS

REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	COMPONENT SPACE (mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
SMA	-T	1,500	6,000	---	---	178	390*205*310	48,000	8.40
SMA	-W	5,000	10,000	---	---	330	360*355*360	80,000	14.20

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