

**SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER**

**VOLTAGE RANGE 20 to 40 Volts CURRENT 3.0 Ampere**

**FEATURES**

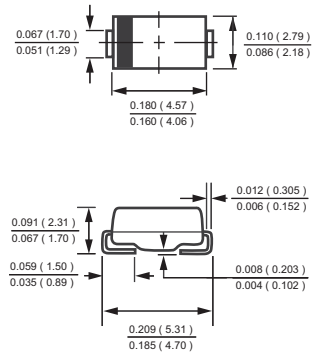
- \* Ideal for surface mounted applications
- \* Low leakage current
- \* Metallurgically bonded construction
- \* Mounting position: Any

**MECHANICAL DATA**

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



**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 <sub>RRM</sub>	20	30	40	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	14	21	28	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	20	30	40	Volts
Maximum Average Forward Rectified Current at Derating Lead Temperature	I <sub>O</sub>	3.0			Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	100			Amps
Typical Current Squared Time	I <sup>2</sup> T	41.5			A <sup>2</sup> S
Non-repetitive avalanche energy IRRM=1A, PW=2us, f= 1 kHz, Ind. 12mH	E <sub>AS</sub>	6.0			mJ
Typical Thermal Resistance (Note 2)	R <sub>θJA</sub>	50			°C/W
	R <sub>θJL</sub>	14			
Typical Junction Capacitance (Note 1)	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	FM5820A	FM5821A	FM5822A	UNITS
Maximum Instantaneous Forward Voltage at 3.0A DC	V <sub>F</sub>	.46			Volts
Maximum Average Reverse Current at Rated DC Blocking Voltage	@T <sub>A</sub> = 25°C	80			uAmps
	@T <sub>A</sub> = 125°C	10			mAmps

NOTES : 1. Measured at 1 MHz and applied reverse voltage of 4.0 volts.  
2. Thermal Resistance : Mounted on PCB.

## RATING AND CHARACTERISTICS CURVES ( FM5820A THRU FM5822A )

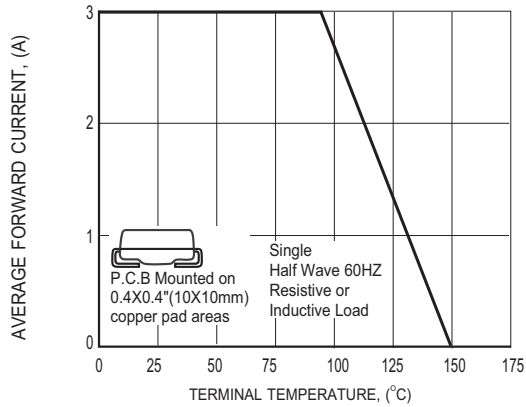


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

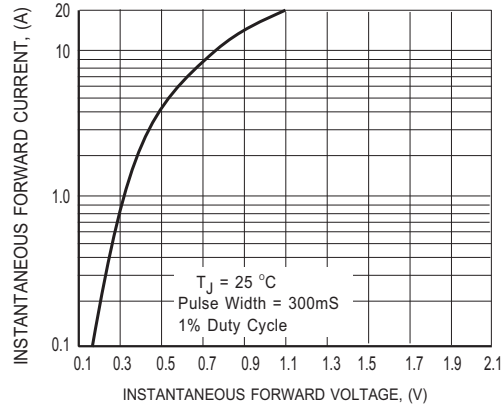


FIG.2 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

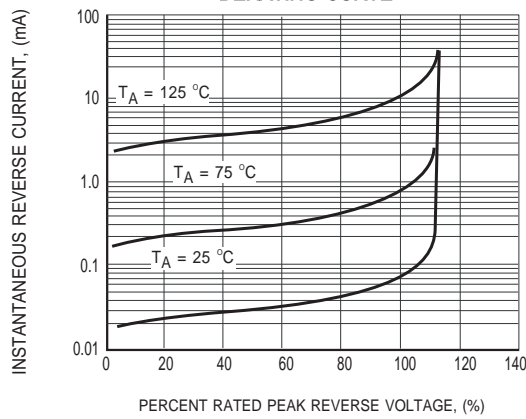


FIG.3 MAXIMUM REVERSE CHARACTERISTICS

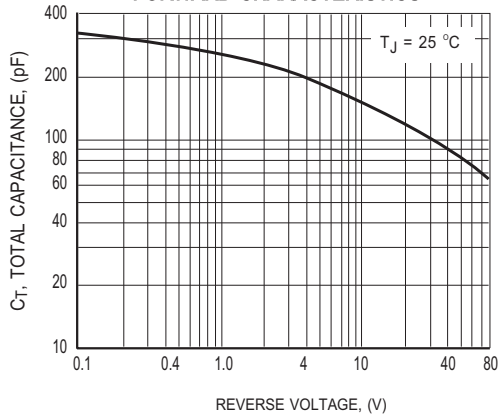


FIG.4 TYPICAL JUNCTION CAPACITANCE

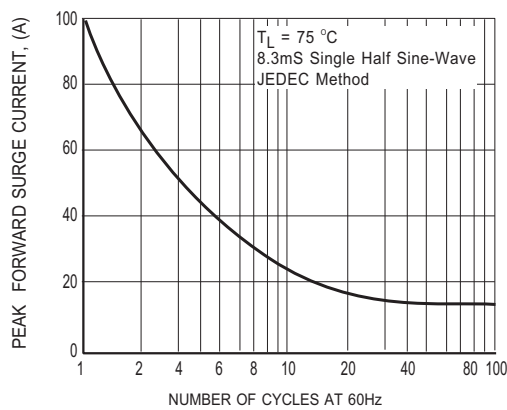
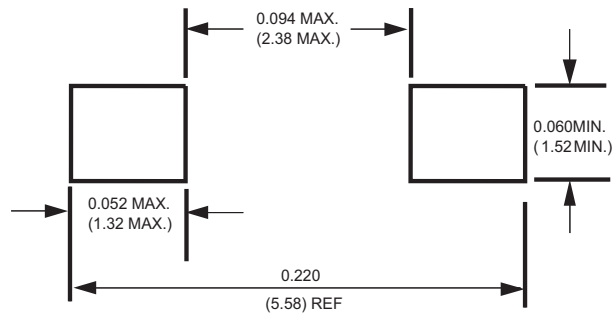


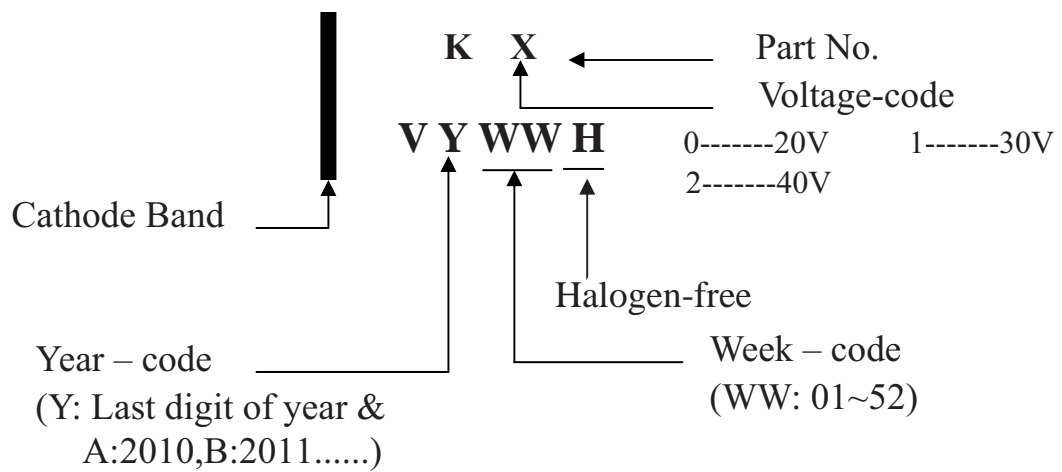
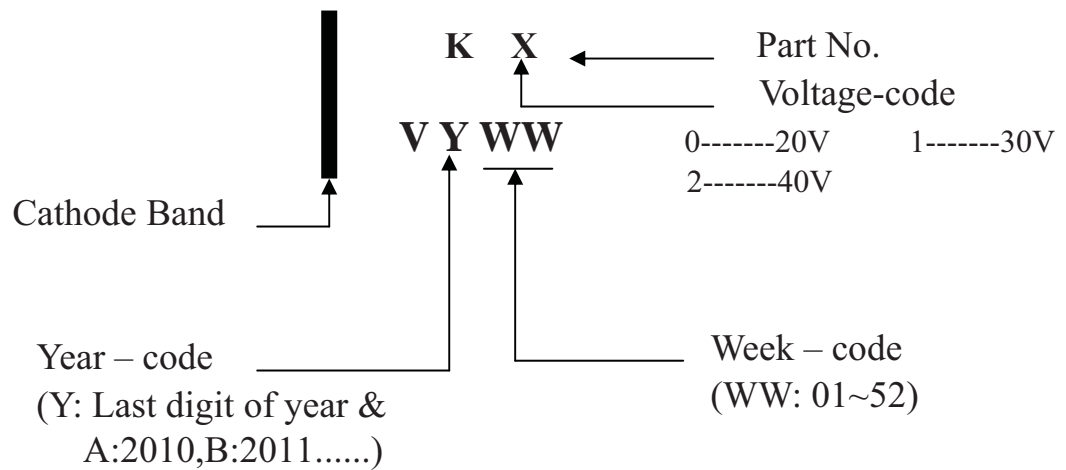
FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

## Mounting Pad Layout



Dimensions in inches and (millimeters)

## Marking Description



## 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	-W	7,500	15,000	---	---	330	360*355*360	120,000	15.2

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	2,000	8,000	---	---	178	390*205*310	64,000	7.8

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