



# CHENMKO ENTERPRISE CO.,LTD

## SURFACE MOUNT GLASS PASSIVATED FAST RECOVERY SILICON RECTIFIER

VOLTAGE RANGE 50 - 1000 Volts CURRENT 1.0 Ampere

**FBM11PT  
THRU  
FBM17PT**

Lead free devices

### FEATURES

- \* Low leakage current
- \* Ideal for surface mounted applications
- \* Metallurgically bonded construction
- \* Fast recovery times for high efficiency
- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- \* Glass passivated junction
- \* High temperature soldering guaranteed : 260°C/10 seconds at terminals

### MECHANICAL DATA

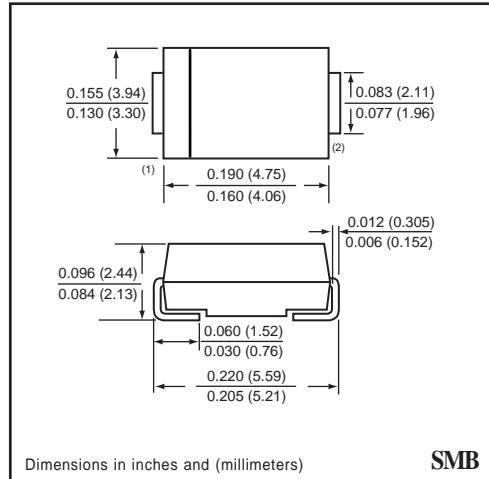
**Case:** JEDEC SMB molded plastic  
**Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026  
**Polarity:** Indicated by cathode band  
**Weight:** 0.003 ounces, 0.093 gram

### 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%.



SMB



SMB

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

RATINGS		SYMBOL	FBM11PT	FBM12PT	FBM13PT	FBM14PT	FBM15PT	FBM16PT	FBM17PT	UNITS	
Maximum Recurrent Peak Reverse Voltage		VRRM	50	100	200	400	600	800	1000	Volts	
Maximum RMS Voltage		VRMS	35	70	140	280	420	560	700	Volts	
Maximum DC Blocking Voltage		Vdc	50	100	200	400	600	800	1000	Volts	
Maximum Average Forward Rectified Current TL = 110°C		Io	1.0								Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)		IFSM					30				Amps
Typical Junction Capacitance (Note 1)		CJ					15				pF
Maximum Thermal Resistance	(Note 2)	R θJL					30				°C / W
	(Note 3)	R θJA					75				°C / W
Operating and Storage Temperature Range		TJ, TSTG	-65 to +150								°C

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

CHARACTERISTICS	SYMBOL	FBM11PT	FBM12PT	FBM13PT	FBM14PT	FBM15PT	FBM16PT	FBM17PT	UNITS	
Maximum Instantaneous Forward Voltage at 1.0 A DC	VF	1.3								Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage at TA = 25°C	IR	5.0								uAmps
Maximum Full Load Reverse Current Average, Full Cycle at TA = 55°C		100								uAmps
Maximum Reverse Recovery Time (Note 4)	trr	150			250		500		nSec	

- NOTES : 1. Measured at 1.0 MHz and applied reverse voltage of 4.0 volts  
 2. Thermal Resistance Junction to terminal 6.0 mm<sup>2</sup> copper pads to each terminal  
 3. Thermal Resistance Junction to ambient 6.0 mm<sup>2</sup> copper pads to each terminal  
 4. Test Conditions : IF = 0.5 A, IR = -1.0 A, IRR = -0.25 A

2004-10

# RATING CHARACTERISTIC CURVES ( FBM11PT THRU FBM17PT )

FIG. 1 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

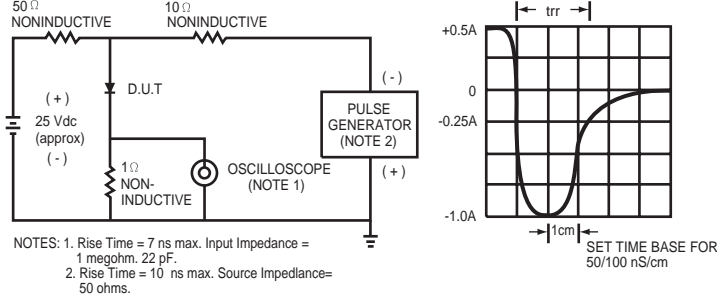


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

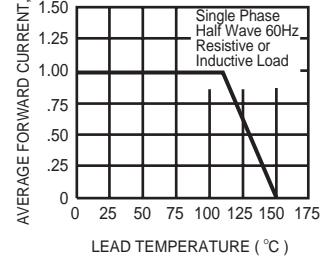


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

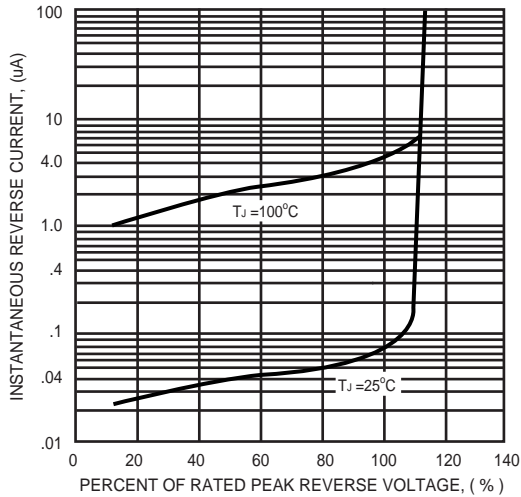


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

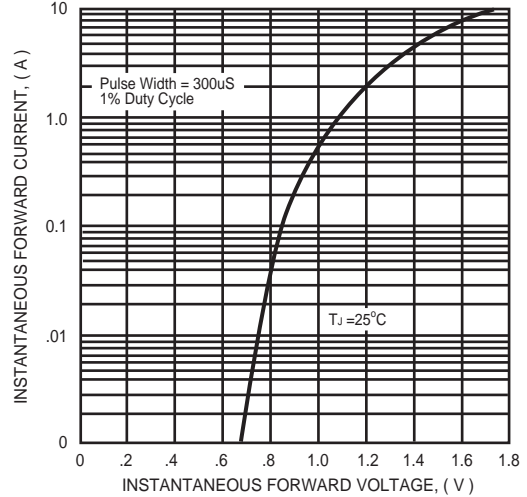


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

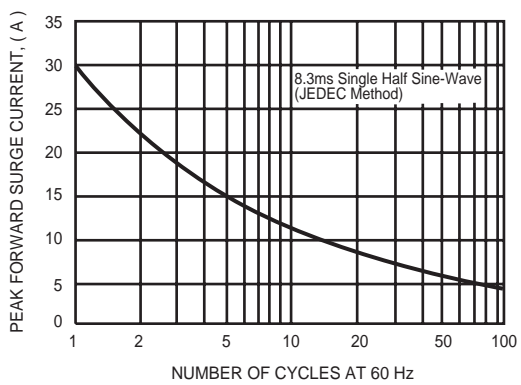


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

