

MBR0520-M THRU MBR05100-M

Silicon epitaxial planer type

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O Utilizing Flame Retardant Epoxy Molding Compound.
- For surface mounted applications.
- Exceeds environmental standards of ML-S-19500 / 228
- Low leakage current

Mechanical data

Case : Molded plastic, JEDEC SOD-123 / MINI SMA

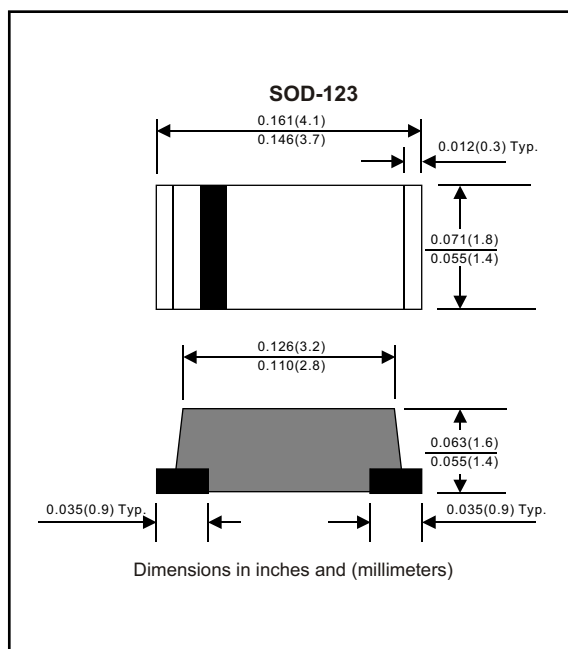
Terminals : Solder plated, solderable per MIL-STD-750,

Method 2026

Polarity : Indicated by cathode band

Mounting Position : Any

Weight : 0.04 gram

**MAXIMUM RATINGS** (AT $T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.1	I_O			0.5	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC methode)	I_{FSM}			15	A
Reverse current	$V_R = V_{RRM}$ $T_A = 25^{\circ}\text{C}$	I_R			0.5	mA
	$V_R = V_{RRM}$ $T_A = 125^{\circ}\text{C}$				10	mA
Thermal resistance	Junction to ambient	R_{JC}		98		$^{\circ}\text{C} / \text{W}$
Diode junction capacitance	$f=1\text{MHz}$ and applied 4VDC reverse voltage	C_J		120		pF
Storage temperature		T_{STG}	-55		+150	$^{\circ}\text{C}$

SYMBOLS	MARKING CODE	V _{RRM} ^{*1} (V)	V _{RMS} ^{*2} (V)	V _R ^{*3} (V)	V _F ^{*4} (V)	Operating temperature (°C)
MBR0520-M	02	20	14	20	0.45	-55 to +125
MBR0530-M	03	30	21	30		
MBR0540-M	04	40	28	40		
MBR0550-M	05	50	35	50	0.65	-55 to +150
MBR0560-M	06	60	42	60		
MBR0580-M	08	80	56	80	0.80	
MBR05100-M	01	100	70	100		

*1 Repetitive peak reverse voltage

*2 RMS voltage

*3 Continuous reverse voltage

*4 Maximum forward voltage

RATING AND CHARACTERISTIC CURVES (MBR0520-M THRU MBR05100-M)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

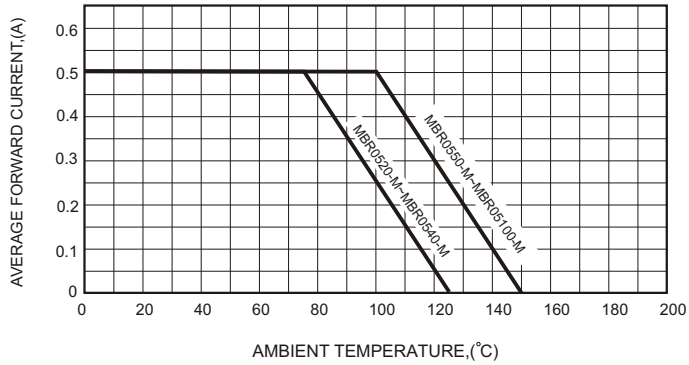


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

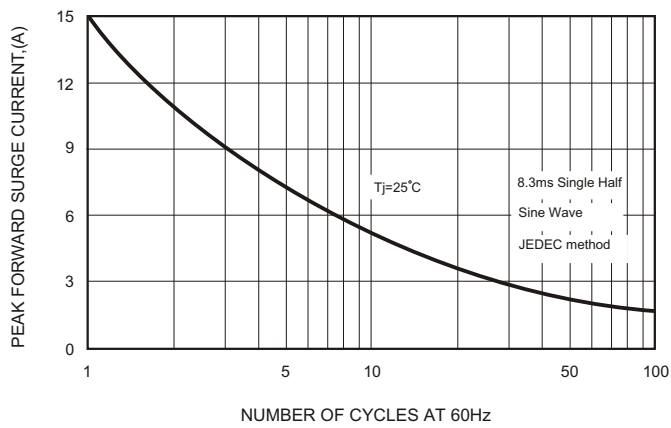


FIG.4-TYPICAL JUNCTION CAPACITANCE

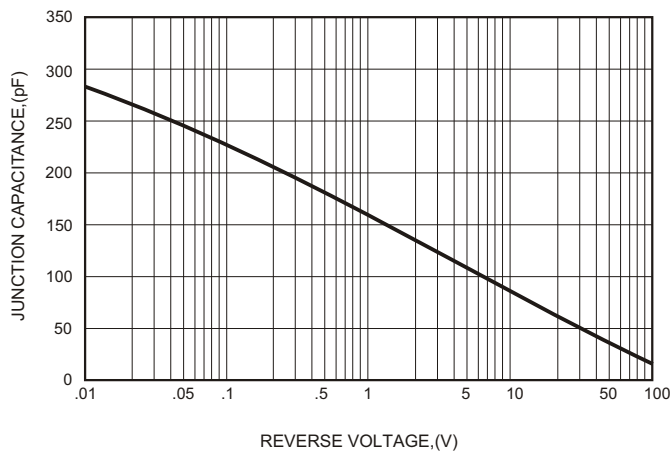


FIG.2-TYPICAL FORWARD CHARACTERISTICS

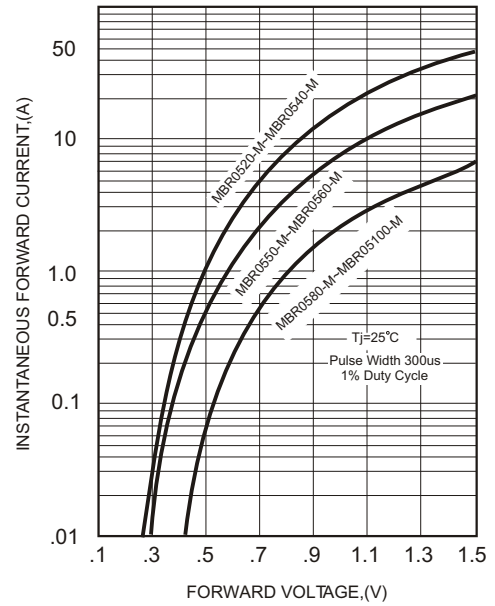


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

