

2.0A Fast Recovery Rectifiers-50-1000V

Package outline

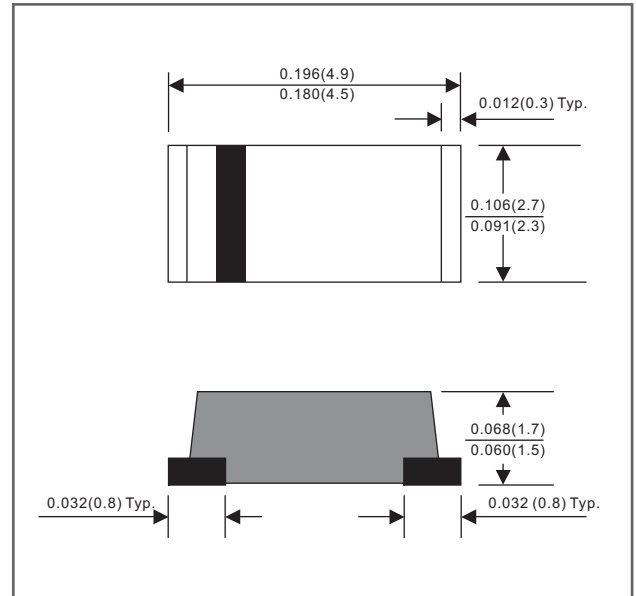
Features

- Batch process design, excellent power dissipation offers better reverse leakage current and thermal resistance.
- Low profile surface mounted application in order to optimize board space.
- High current capability.
- Fast switching for high efficiency.
- High surge current capability.
- Glass passivated chip junction.
- Lead- free parts meet RoHS requirements.
- Suffix "-H" indicates Halogen-free parts, ex. FFM201-MG-H.

Mechanical data

- Epoxy: UL94-V0 rated flame retardant
- Case: Molded plastic, JEDEC DO-214AC / SMA
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Indicated by cathode band
- Mounting Position: Any
- Weight: Approximated 0.05 gram

SMA



Dimensions in inches and (millimeters)

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			2.0	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC methode)	I_{FSM}			50	A
Reverse current	$V_R = V_{RRM} \quad T_J = 25^\circ\text{C}$	I_R			5.0	μA
	$V_R = V_{RRM} \quad T_J = 125^\circ\text{C}$				100	
Thermal resistance	Junction to ambient	$R_{\theta JA}$		35		$^\circ\text{C/W}$
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	C_J		40		pF
Storage temperature		T_{STG}	-65		+175	$^\circ\text{C}$

SYMBOLS	V _{RRM} ^{*1} (V)	V _{RMS} ^{*2} (V)	V _R ^{*3} (V)	V _F ^{*4} (V)	T _{RR} ^{*5} (nS)	Operating temperature T _J , (°C)
FFM201G	50	35	50	1.30	150	-55 to +150
FFM202G	100	70	100			
FFM203G	200	140	200			
FFM204G	400	280	400		250	
FFM205G	600	420	600			
FFM206G	800	560	800		500	
FFM207G	1000	700	1000			

*1 Repetitive peak reverse voltage

*2 RMS voltage

*3 Continuous reverse voltage

*4 Maximum forward voltage@ $I_F=2.0\text{A}$

*5 Maximum Reverse recovery time, note 1

Note 1. Reverse recovery time test condition, $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$

Rating and characteristic curves

FIG.1-TYPICAL FORWARD CHARACTERISTICS

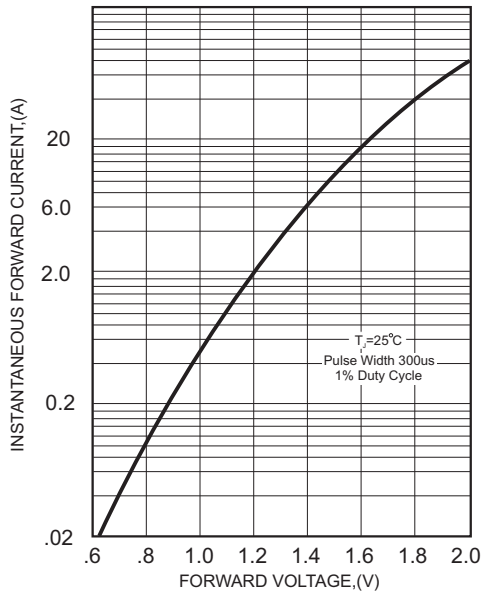


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

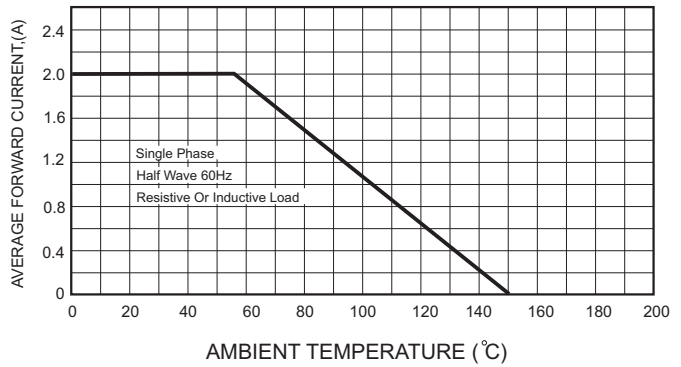


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

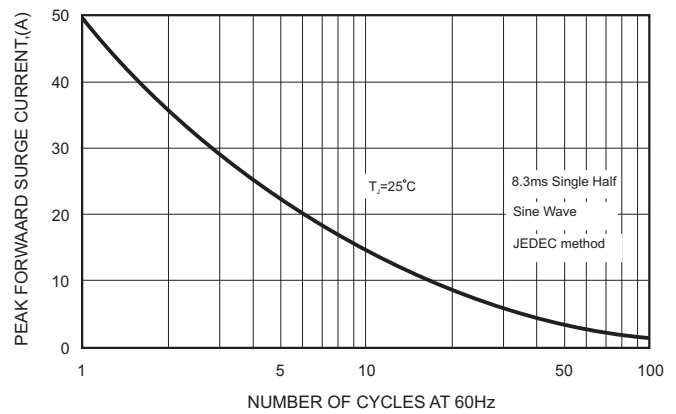
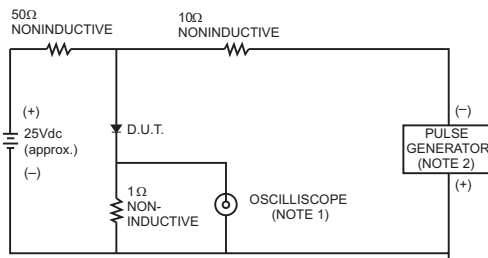


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm, 22pF.

2. Rise Time= 10ns max., Source Impedance= 50 ohms.

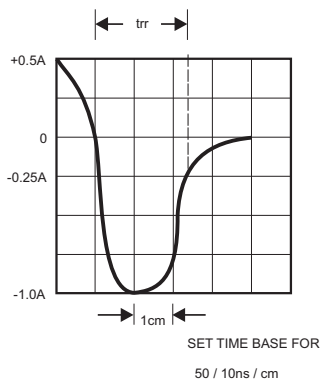


FIG.5-TYPICAL JUNCTION CAPACITANCE

