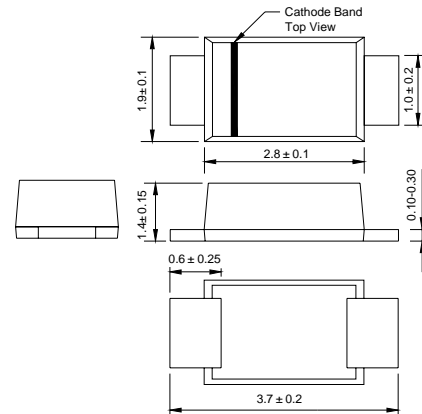




Features

- ◇ 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.
- ◇ Tiny plastic SMD package.
- ◇ High current capability.
- ◇ Fast switching for high efficiency.
- ◇ High surge current capability.
- ◇ Glass passivated chip junction.
- ◇ Lead-free parts meet RoHS requirements.

SOD - 123FL



Dimensions in millimeters

Mechanical data

- ◇ Case : Molded plastic, SOD-123FL
- ◇ Polarity : Indicated by cathode band
- ◇ Mounting Position : Any
- ◇ Weight : Approximated 0.01gram

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Maximum ratings

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.2	I_O			1.0	A
Forward surge current	8.3ms single halfsine-wave superimposed on rate load (JEDEC method)	I_{FSM}			30	A
Reverse current	$V_R = V_{RRM}$ $T_A = 25^\circ\text{C}$	I_R			5.0	uA
	$V_R = V_{RRM}$ $T_A = 100^\circ\text{C}$				100	
Thermal resistance	Junction to ambient	$R_{\theta JA}$		42		°C/W
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	C_J		15		pF
Storage temperature		T_{STG}	-65		+175	°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)
FM101	50	35	50	1.30	150	-55 to +150
FM102	100	70	100			
FM103	200	140	200			
FM104	400	280	400		250	
FM105	600	420	600			
FM106	800	560	800		500	
FM107	1000	700	1000			

*1 Repetitive peak reverse voltage

*2 RMS voltage

*3 Continuous reverse voltage

*4 Maximum forward voltage

*5 Reverse recovery time

Rating and characteristic curves (FM101 THRU FM107)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

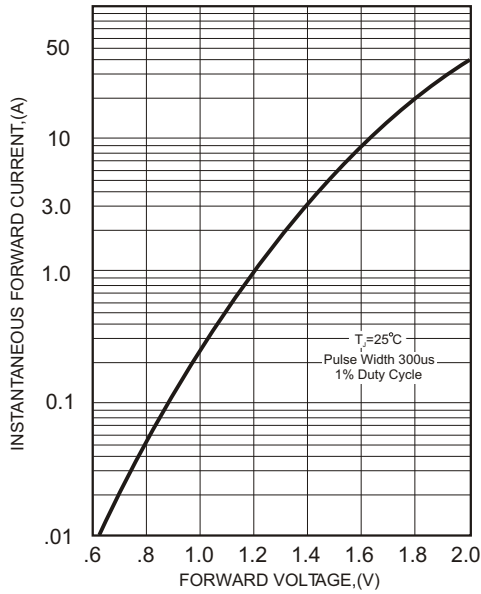


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

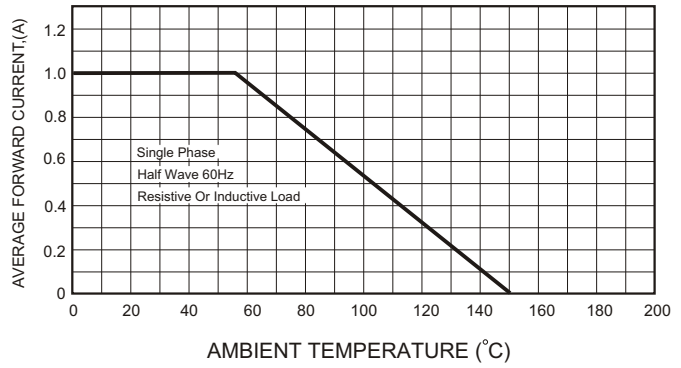


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

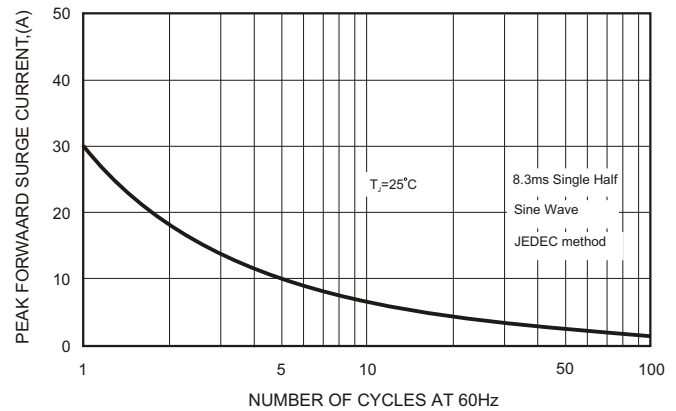
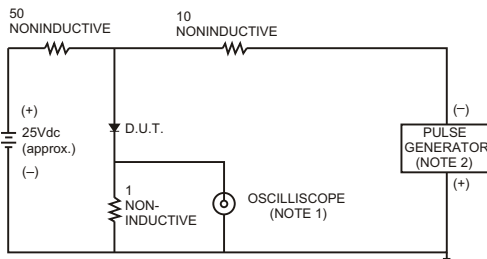


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm.22pF.
2. Rise Time= 10ns max., Source Impedance= 50 ohms.

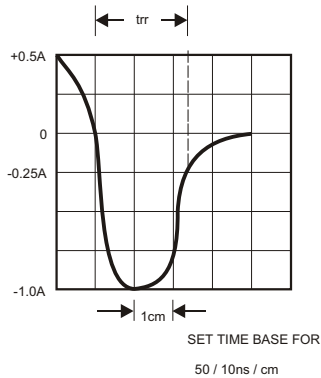


FIG.5-TYPICAL JUNCTION CAPACITANCE

