TIGER ELECTRONIC CO.,LTD

RoHS COMPLIANT

FFM101 - FFM107

1.0A Surface Mount Fast Recovery Rectifiers

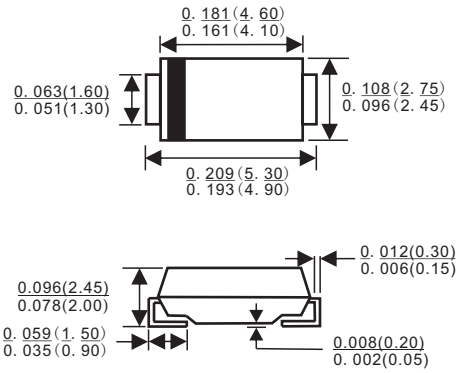
Features

- ✧ 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 requirments.

Mechanical data

- ✧ Case : Molded plastic, SMA
- ✧ Polarity : Indicated by cathode band
- ✧ Mounting Position : Any
- ✧ Weight : Approximated 0.01gram

SMA/DO-214AC



Dimensions in inches and(millimeters)

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 half sine-wave superimposed on rate load (JEDEC methode)	I_{FSM}			30	A
Reverse current	$V_R = V_{RRM}$ $T_A = 25°C$	I_R			5.0	uA
	$V_R = V_{RRM}$ $T_A = 100°C$				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)
FFM101	50	35	50	1.30	150	-55 to +150
FFM102	100	70	100			
FFM103	200	140	200			
FFM104	400	280	400			
FFM105	600	420	600		250	
FFM106	800	560	800		500	
FFM107	1000	700	1000			

*1 Repetitive peak reverse voltage

*2 RMS voltage

*3 Continuous reverse voltage

*4 Maximum forward voltage

*5 Reverse recovery time

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Rating and characteristic curves (FFM101 THRU FFM107)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

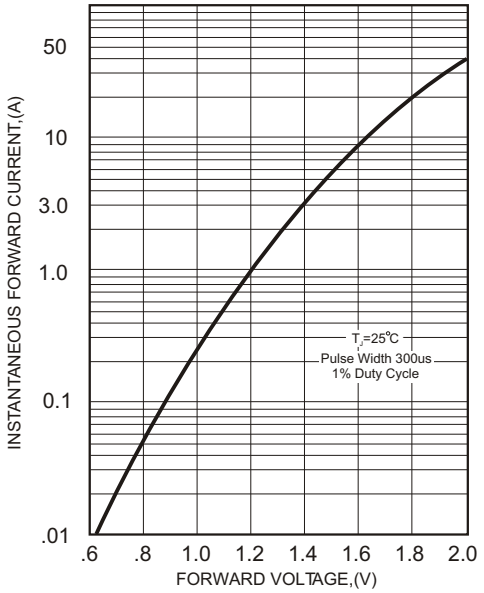


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

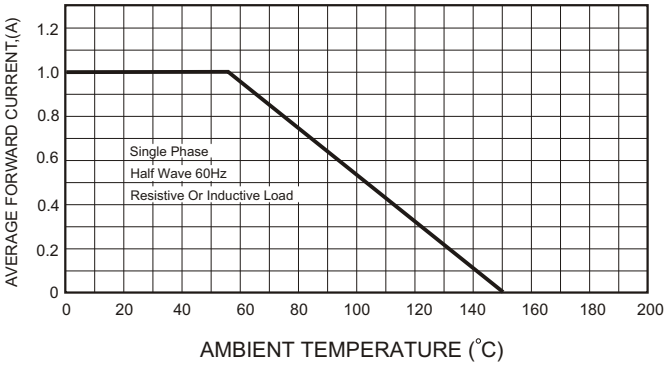
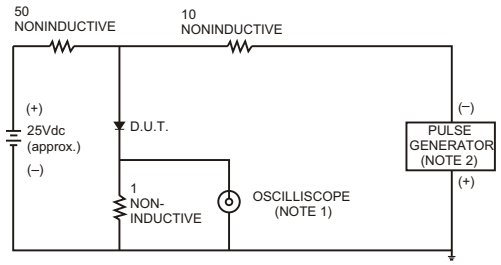
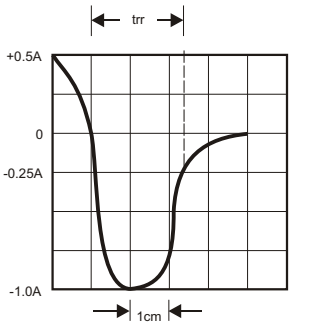


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

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



SET TIME BASE FOR

50 / 10ns / cm

FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

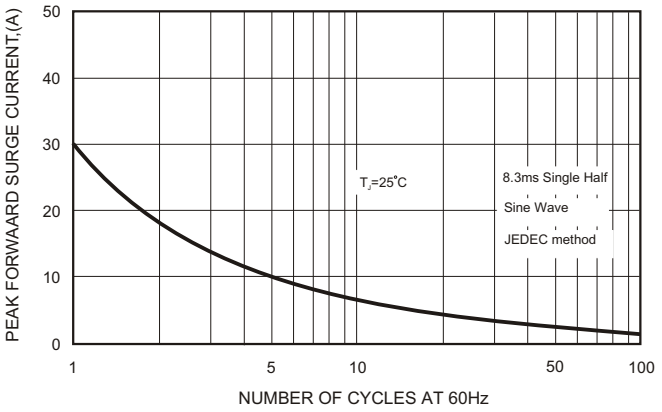


FIG.5-TYPICAL JUNCTION CAPACITANCE