

Chip Silicon Rectifier

Formosa MS

# SFM11 THRU SFM16

Super fast recovery 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

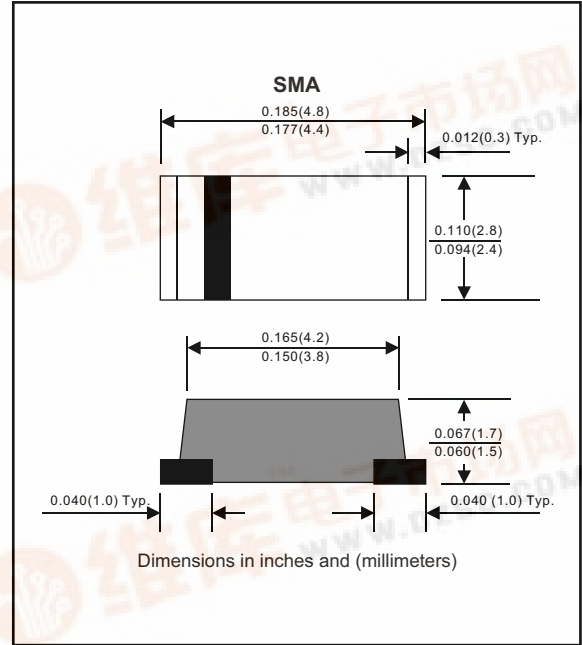
Case : Molded plastic, JEDEC DO-214AC

Terminals : Solder plated, solderable per MIL-STD-750, Method 2026

Polarity : Indicated by cathode band

Mounting Position : Any

Weight : 0.0015 ounce, 0.05 gram



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

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	Ambient temperature = $50^{\circ}\text{C}$	$I_0$			1.0	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC methode)	$I_{FSM}$			30	A
Reverse current	$V_R = V_{RRM}$ $T_A = 25^{\circ}\text{C}$	$I_R$			5.0	$\mu\text{A}$
	$V_R = V_{RRM}$ $T_A = 100^{\circ}\text{C}$				100	$\mu\text{A}$
Thermal resistance	Junction to ambient	$R_{QJA}$		32		$^{\circ}\text{C} / \text{w}$
Diode junction capacitance	$f=1\text{MHz}$ and applied 4vDC reverse voltage	$C_J$		10		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)	$T_{RR}^{*5}$ (nS)	Operating temperature ( $^{\circ}\text{C}$ )
SFM11	S11	50	35	50	0.95	35	-55 to +150
SFM12	S12	100	70	100			
SFM13	S13	150	105	150			
SFM14	S14	200	140	200			
SFM15	S15	300	210	300	1.25		
SFM16	S16	400	280	400			

- \*1 Repetitive peak reverse voltage
- \*2 RMS voltage
- \*3 Continuous reverse voltage
- \*4 Maximum forward voltage
- \*5 Reverse recovery time



## RATING AND CHARACTERISTIC CURVES (SFM11 THRU SFM16)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

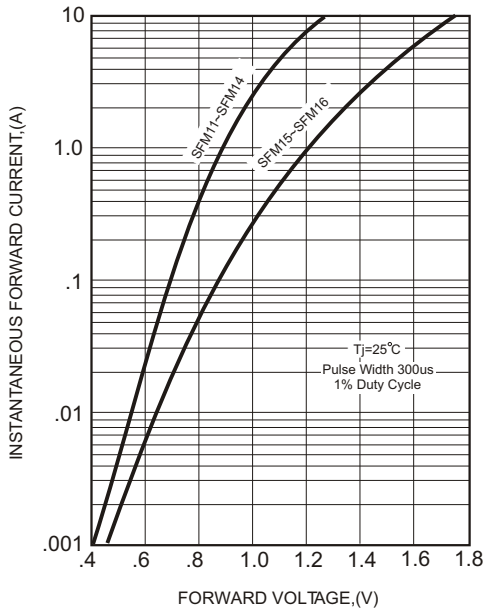


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

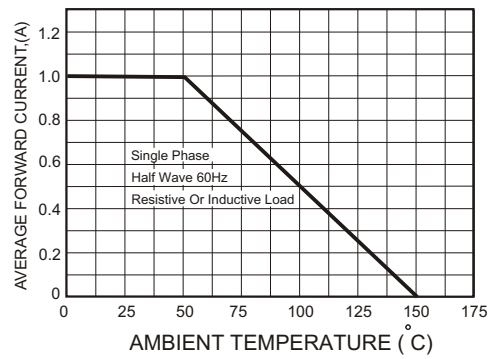
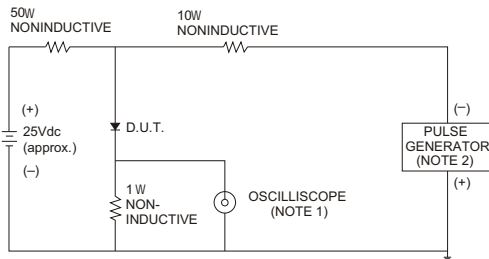


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

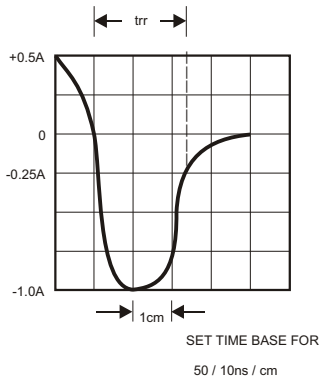


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

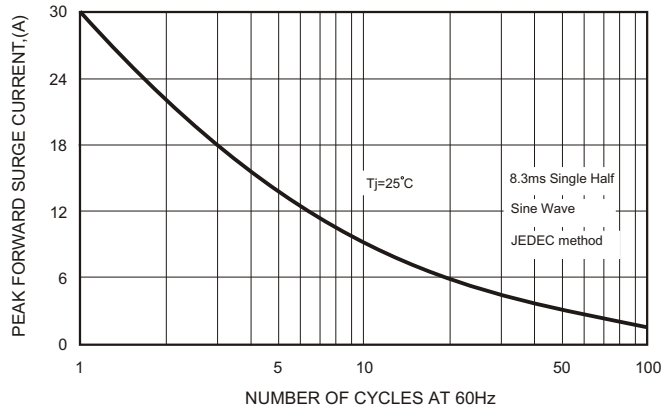


FIG.5-TYPICAL JUNCTION CAPACITANCE

