

SFM31 THRU SFM36

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 MIL-S-19500 / 228
- Low leakage current

Mechanical data

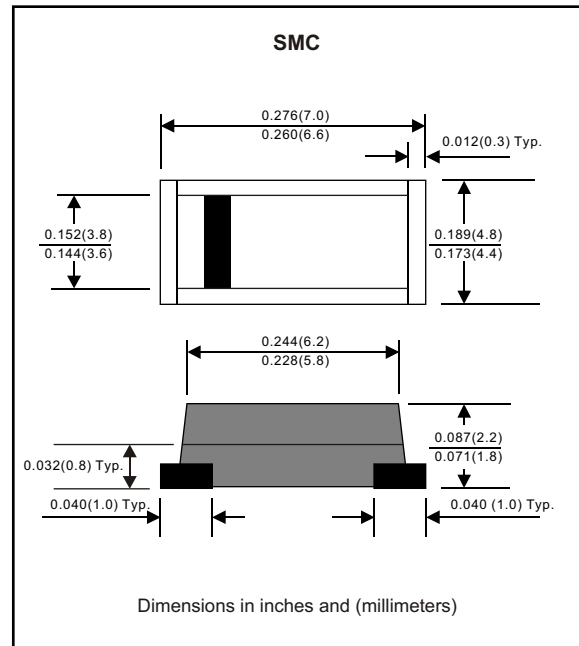
Case : Molded plastic, JEDECDO-214AB

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

Polarity : Indicated by cathode band

Mounting Position : Any

Weight : 0.00585 ounce, 0.195 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°C	I_0			3.0	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC methode)	I_{FSM}			100	A
Reverse current	$V_R = V_{RRM}$ $T_A = 25^{\circ}\text{C}$	I_R			5.0	μA
	$V_R = V_{RRM}$ $T_A = 100^{\circ}\text{C}$				100	μA
Thermal resistance	Junction to ambient	R_{JA}		16		$^{\circ}\text{C} / \text{W}$
Diode junction capacitance	$f=1\text{MHz}$ and applied 4vDC reverse voltage	C_J		45		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 ($^{\circ}\text{C}$)
SFM31	S31	50	35	50	0.95	35	-55 to +150
SFM32	S32	100	70	100			
SFM33	S33	150	105	150			
SFM34	S34	200	140	200	1.25		
SFM35	S35	300	210	300			
SFM36	S36	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 (SFM31 THRU SFM36)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

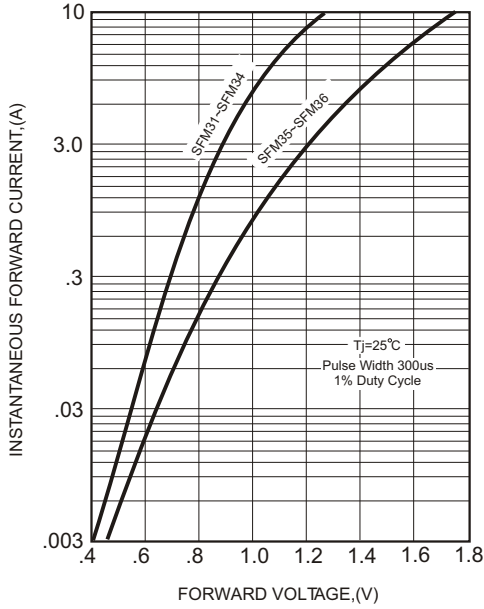


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

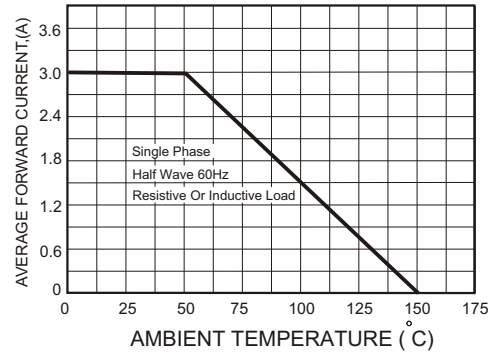
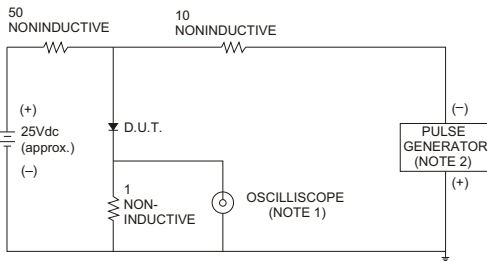


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

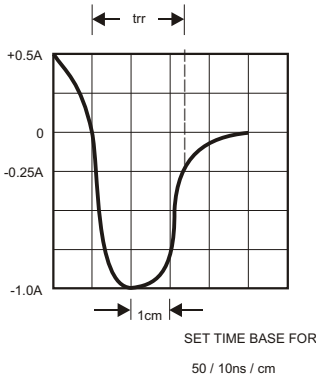


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

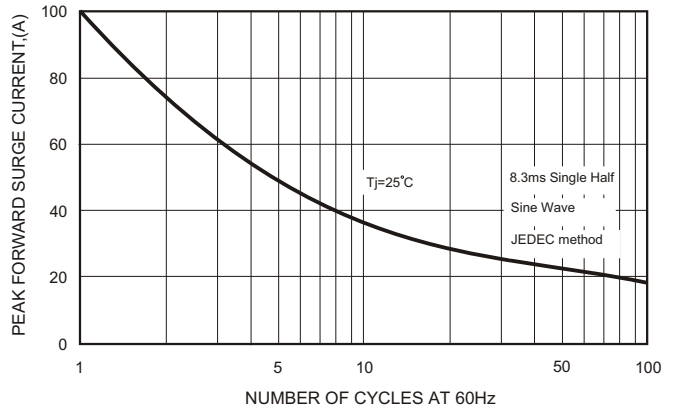


FIG.5-TYPICAL JUNCTION CAPACITANCE

