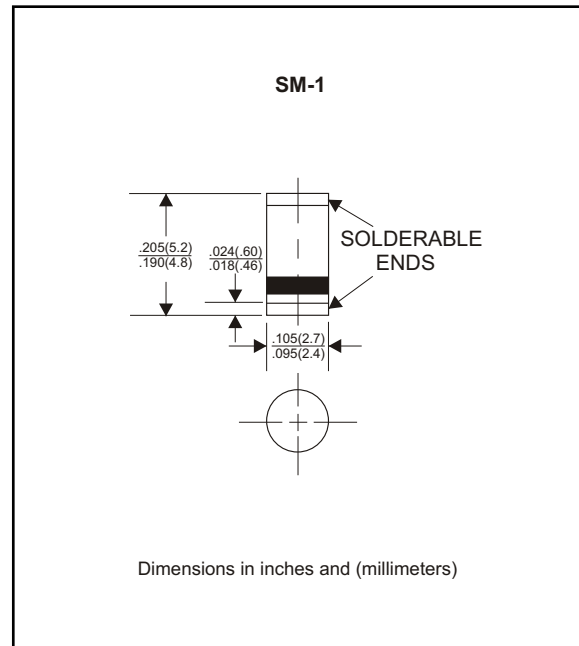


# SM120 THRU SM160

Silicon epitaxial planer 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 : Moulded plastic, SM-1 (MELF)  
 Terminals : Solder plated, solderable per ML-STD-750, Method 2026  
 Polarity : Indicated by cathode band  
 Mounting Position : Any  
 Weight : 0.015 gram

## 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	$I_0$			1.0	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC methode)	$I_{FSM}$			40	A
Reverse current	$V_R = V_{RRM} T_A = 25^{\circ}\text{C}$	$I_R$			1.0	mA
	$V_R = V_{RRM} T_A = 125^{\circ}\text{C}$				10	mA
Thermal resistance	Junction to ambient	$R_{QJA}$		50		$^{\circ}\text{C} / \text{w}$
Diode junction capacitance	f=1MHz and applied 4vDC reverse voltage	$C_J$		110		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)	Operating temperature ( $^{\circ}\text{C}$ )
SM120	-	20	14	20	0.55	-55 to +125
SM130	-	30	21	30		
SM140	-	40	28	40		
SM150	-	50	35	50	0.70	-55 to +150
SM160	-	60	42	60		

- \*1 Repetitive peak reverse voltage
- \*2 RMS voltage
- \*3 Continuous reverse voltage
- \*4 Maximum forward voltage

## RATING AND CHARACTERISTIC CURVES (SM120 THRU SM160)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

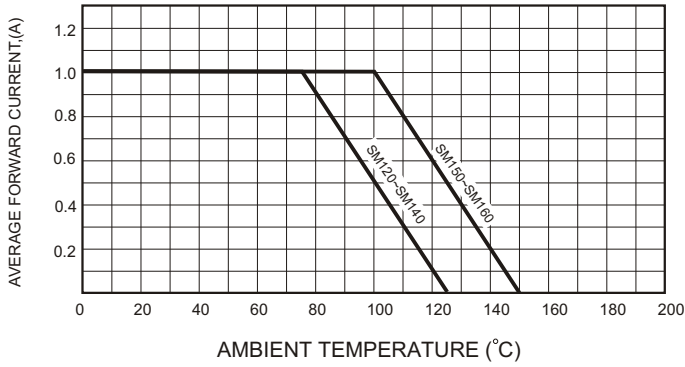


FIG.2-TYPICAL FORWARD CHARACTERISTICS

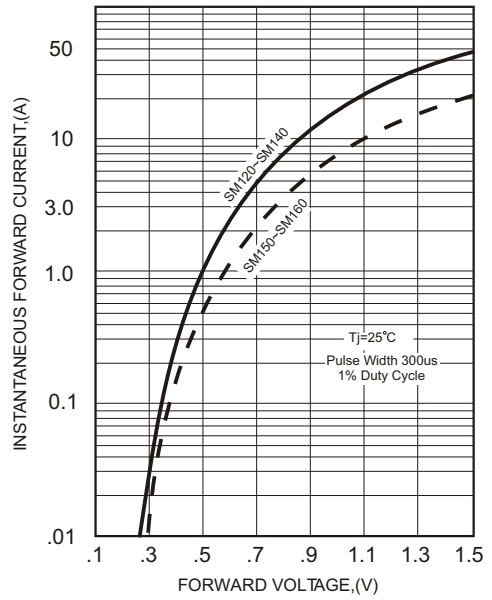


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

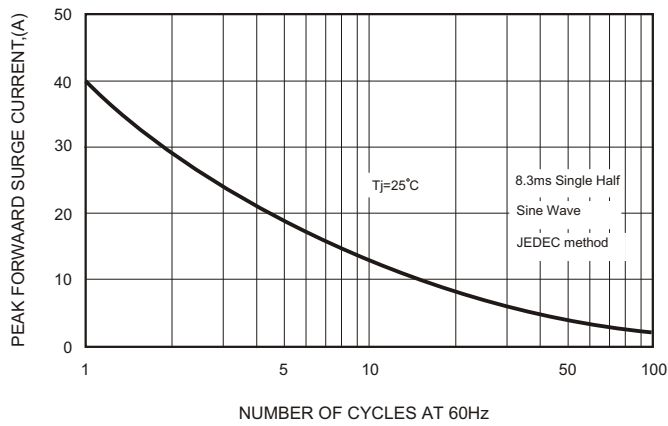


FIG.4-TYPICAL JUNCTION CAPACITANCE

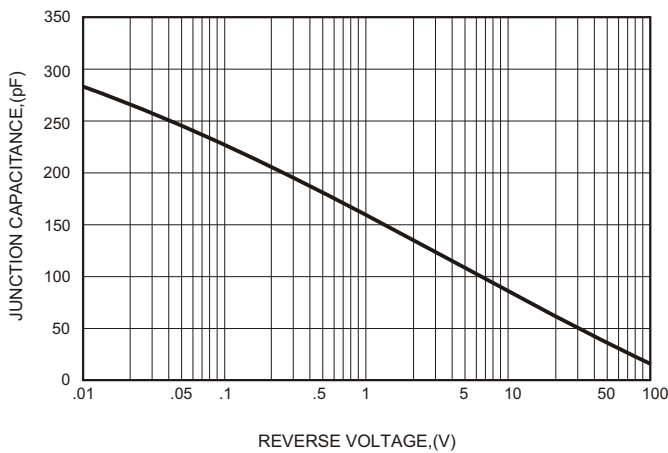


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

