

MELF Schottky Barrier Diodes

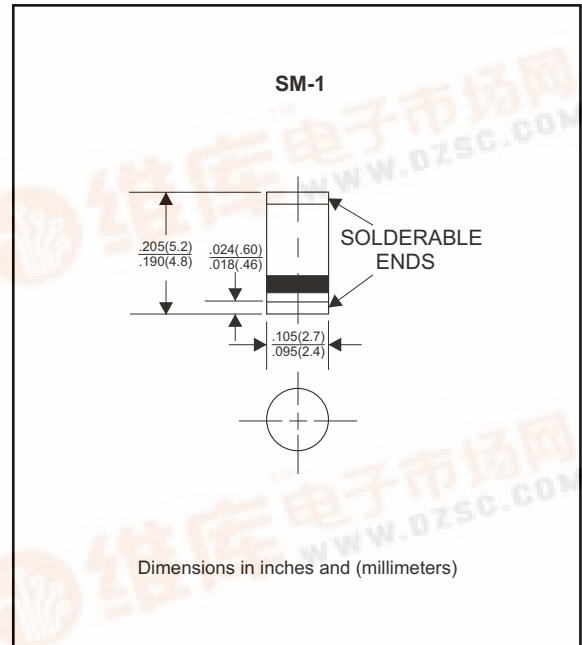
Formosa MS

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 : Molded 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_O			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

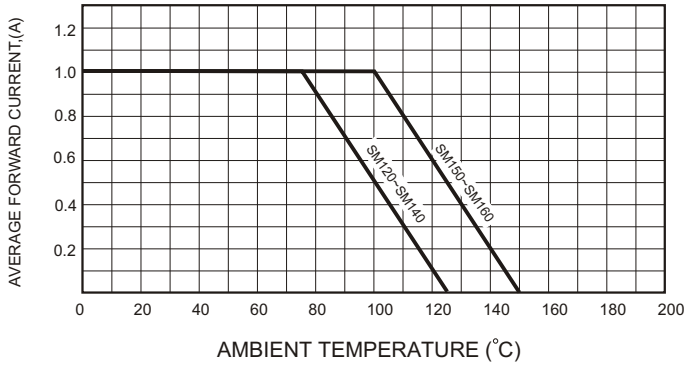


FIG.2-TYPICAL FORWARD CHARACTERISTICS

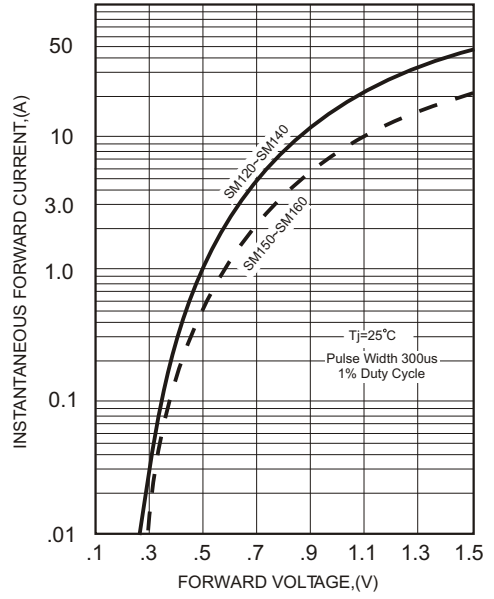


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

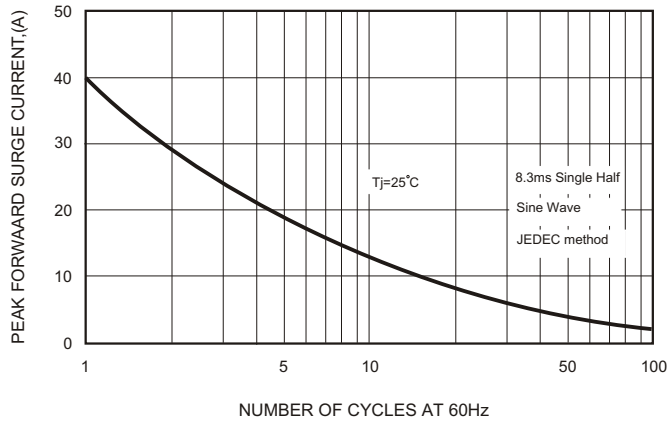


FIG.4-TYPICAL JUNCTION CAPACITANCE

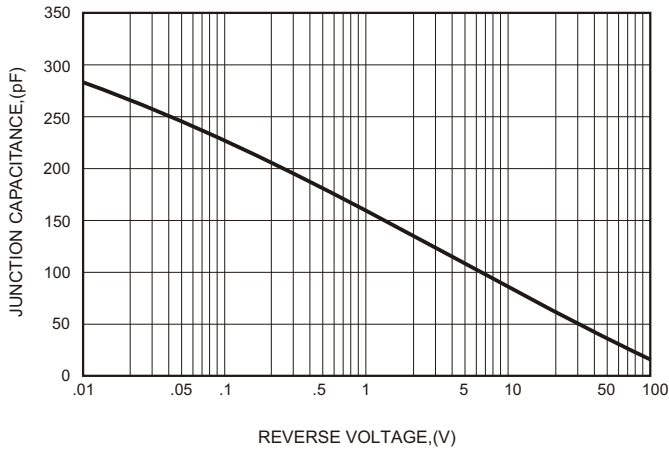


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

