

RoHS Compliant Product

A suffix of "-C" specifies halogen-free and RoHS Compliant

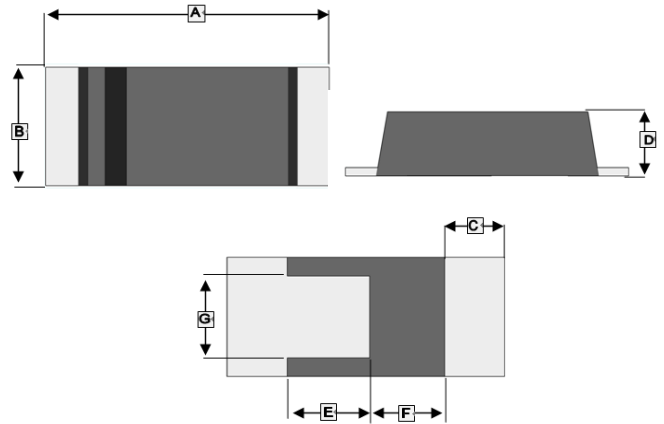
FEATURES

- 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.
- Low power loss, high efficiency.
- High current capability, low forward voltage drop.
- High surge capability
- Guarding for overvoltage protection
- Ultra high-speed switching
- Silicon epitaxial planar chip, metal silicon junction
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

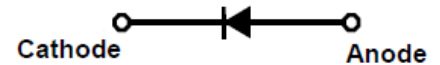
MECHANICAL DATA

- Epoxy:UL94-V0 rated flame retardant
- Case : Molded plastic, SOD-123HT
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Mounting Position : Any
- Weight : Approximated 0.011 gram

SOD-123HT



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	3.3	3.7	E	1.0	1.2
B	1.4	1.8	F	0.7	0.9
C	0.8 TYP.		G	1.0	1.2
D	0.6	1.0			



MARKING

Product	Marking Code	Product	Marking Code
SM140HT	14	SM1100HT	10
SM160HT	16	SM1150HT	115

PACKAGE INFORMATION

Package	MPQ	Leader Size
SOD-123HT	3K	7 inch

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Part Number				Unit
		SM140HT	SM160HT	SM1100HT	SM1150HT	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	40	60	100	150	V
Maximum RMS Voltage	V_{RMS}	28	42	70	105	V
Continuous reverse voltage	V_R	40	60	100	150	V
Maximum Average Forward Rectified Current, See Fig.1	I_O	1				A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	30				A
Maximum Instantaneous Forward Voltage @ $I_F=3A$	V_F	0.5	0.7	0.85	0.9	V
Maximum Reverse Current	$T_J=25^\circ\text{C}$	0.5				mA
	$T_J=100^\circ\text{C}$	10				
Typical Junction Capacitance ¹	C_J	120				pF
Typical Thermal Resistance	$R_{\theta JC}$	30				$^\circ\text{C} / \text{W}$
Operating Temperature	T_J	-55~125	-55~150			$^\circ\text{C}$
Storage Temperature	T_{STG}	-65~175				$^\circ\text{C}$

Note:

1. $f=1\text{MHz}$ and applied 4V DC reverse voltage.

CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

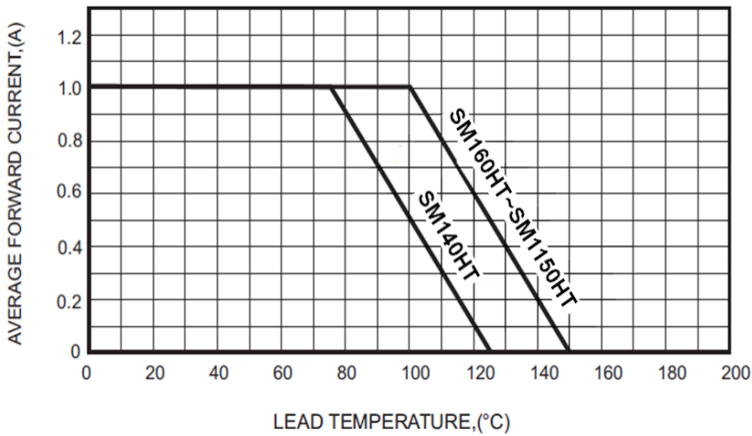


FIG.2-TYPICAL FORWARD CHARACTERISTICS

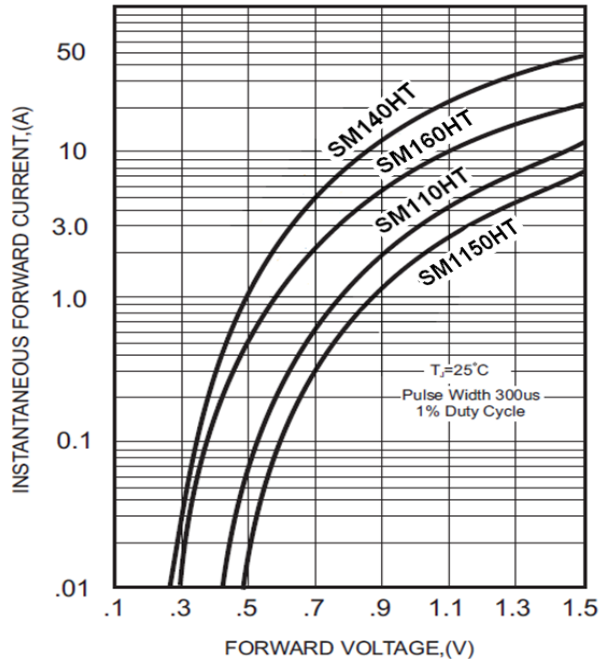


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

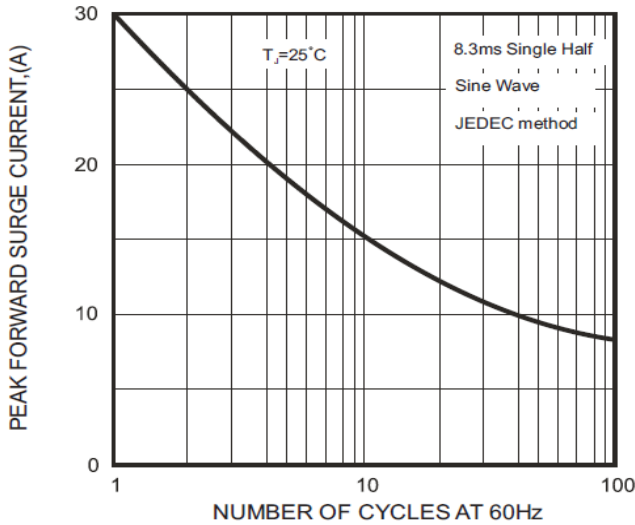


FIG.4-TYPICAL JUNCTION CAPACITANCE

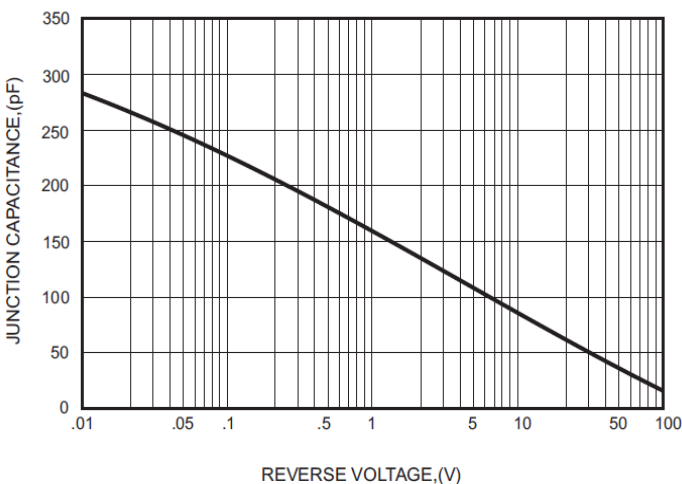


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

