Elektronische Bauelemente

SM140HT~SM1150HT

Voltage 40V ~ 150V

1.0 Amp Surface Mount Schottky Barrier Rectifiers

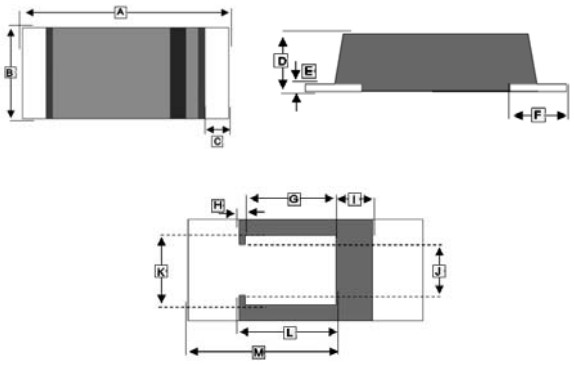
RoHS Compliant Product

A suffix of “-C” specifies halogen-free and RoHS Compliant

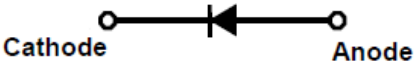
FEATURES

- 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

SOD-123HT



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	3.3	3.7	H	0.6 TYP.	
B	1.4	1.8	I	0.6	0.8
C	0.3 TYP.		J	0.75	0.85
D	0.6	1.0	K	1.0	1.2
E	0.1 TYP.		L	1.1	1.3
F	0.8 TYP.		M	1.9	2.1
G	1.0	1.2			



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

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°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=1A		V_F	0.5	0.7	0.85	0.9	V
Maximum Reverse Current	T_J=25°C	I_R	0.5				mA
	T_J=100°C		10				
Typical Junction Capacitance [1]		C_J	120				pF
Typical Thermal Resistance		$R_{\theta JC}$	30				°C / W
Operating Temperature		T_J	-55~125	-55~150			°C
Storage Temperature		T_{STG}	-65~175				°C

Note:
1. f=1MHz and applied 4V DC reverse voltage.

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CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

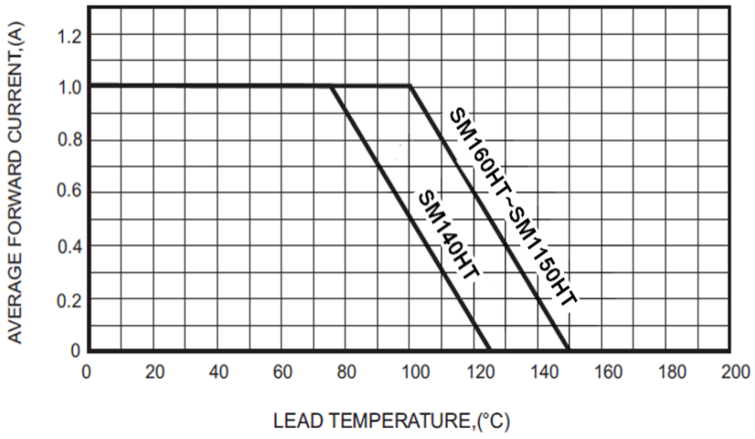

FIG.2-TYPICAL FORWARD CHARACTERISTICS

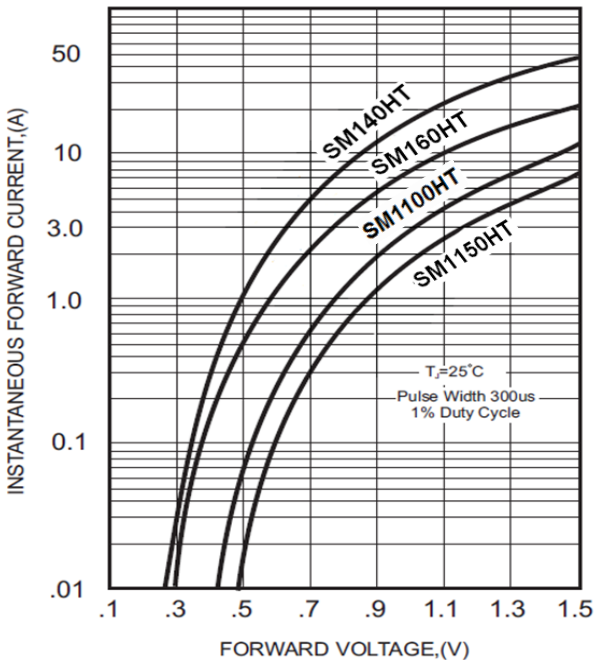

FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

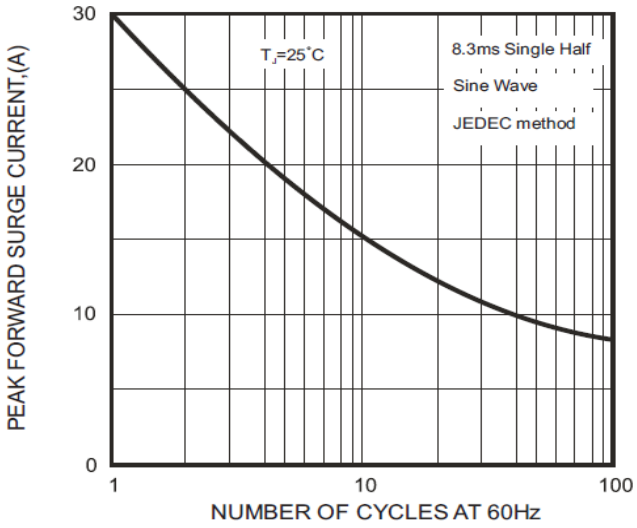

FIG.4-TYPICAL JUNCTION CAPACITANCE

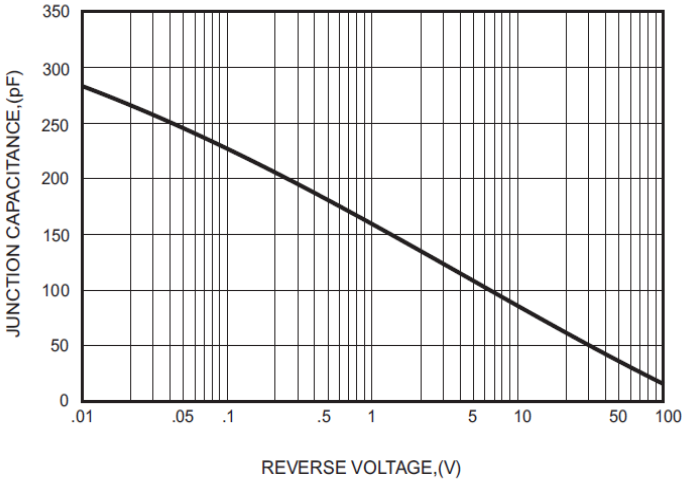

FIG.5 - TYPICAL REVERSE CHARACTERISTICS