

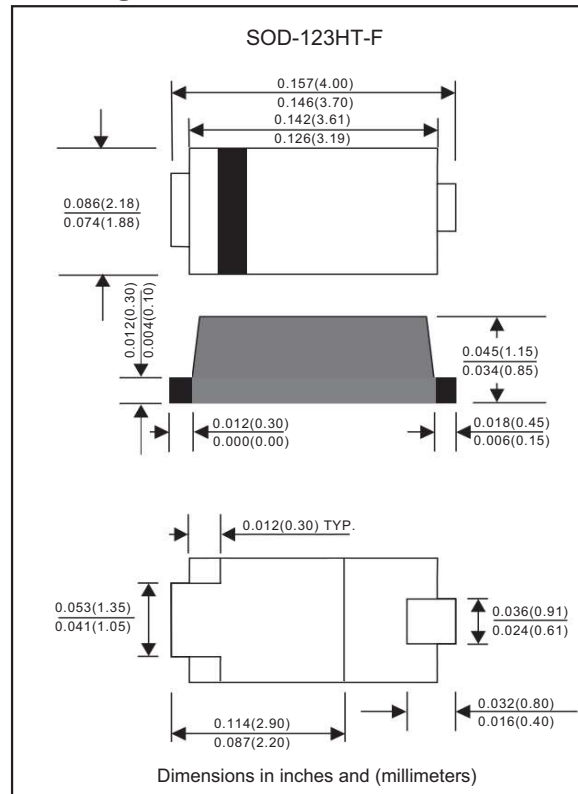
### Features

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- High forward surge capability
- Super Fast reverse recovery time
- Compliant to Halogen-free
- Suffix "-Q1" for AEC-Q101

### Mechanical data

- **Package:** SOD-123HT-F  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

### Package outline



### Maximum ratings and Electrical Characteristics (AT $T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.1	$I_O$			2.0	A
Forward surge current	@60Hz Half-sine wave, 1 cycle, $T_J=25$	$I_{FSM}$			50	A
Reverse current	$V_R = V_{RRM}$ $T_J = 25^{\circ}\text{C}$	$I_R$			5.0	$\mu\text{A}$
	$V_R = V_{RRM}$ $T_J = 125^{\circ}\text{C}$				100	
Thermal resistance	Junction to ambient NOTE 1	$R_{\theta JA}$		68		$^{\circ}\text{C}/\text{W}$
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	$C_J$		12		pF
Storage temperature		$T_{STG}$	-55		+150	$^{\circ}\text{C}$

Note:

- (1) Thermal resistance between junction and ambient and between junction and lead mounted on P.C.B with 3mm\*3mm copper pad areas.

SYMBOLS	$V_{RRM}^{*1}$ (V)	$V_{RMS}^{*2}$ (V)	$V_R^{*3}$ (V)	$V_F^{*4}$ (V)	Operating temperature $T_J$ , ( $^{\circ}\text{C}$ )
DSR2A-MHT-F-Q1	50	35	50	1.10	-55 to +150
DSR2B-MHT-F-Q1	100	70	100		
DSR2D-MHT-F-Q1	200	140	200		
DSR2G-MHT-F-Q1	400	280	400		
DSR2J-MHT-F-Q1	600	420	600		
DSR2K-MHT-F-Q1	800	560	800		
DSR2M-MHT-F-Q1	1000	700	1000		

- \*1 Repetitive peak reverse voltage
- \*2 RMS voltage
- \*3 Continuous reverse voltage
- \*4 Maximum forward voltage@ $I_F=2.0\text{A}$

### Characteristics (Typical)

FIG.1: I<sub>o</sub>-T<sub>L</sub> Curve

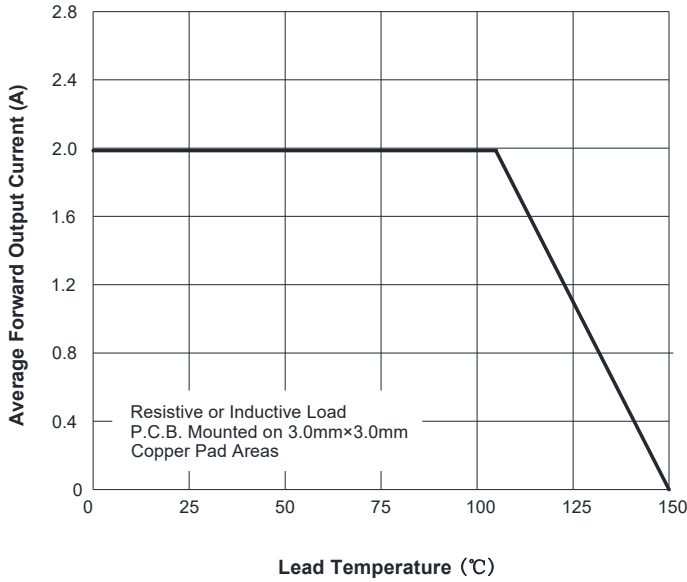


FIG.2: Forward Surge Current Capability

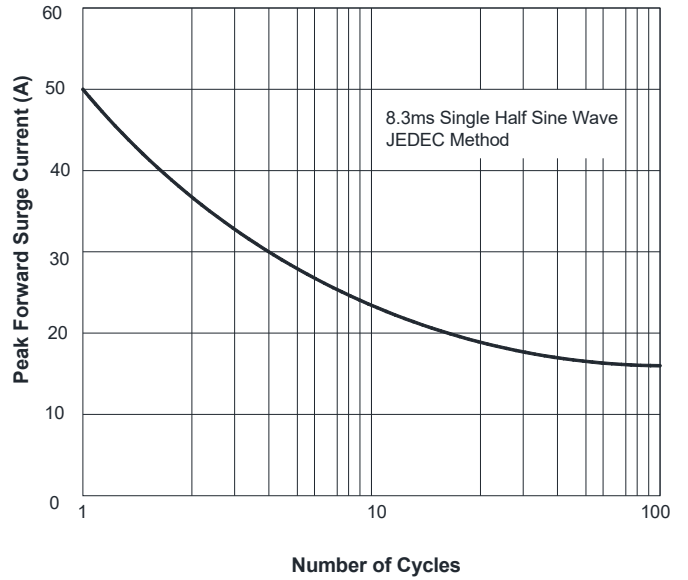


FIG.3: Typical Forward Voltage

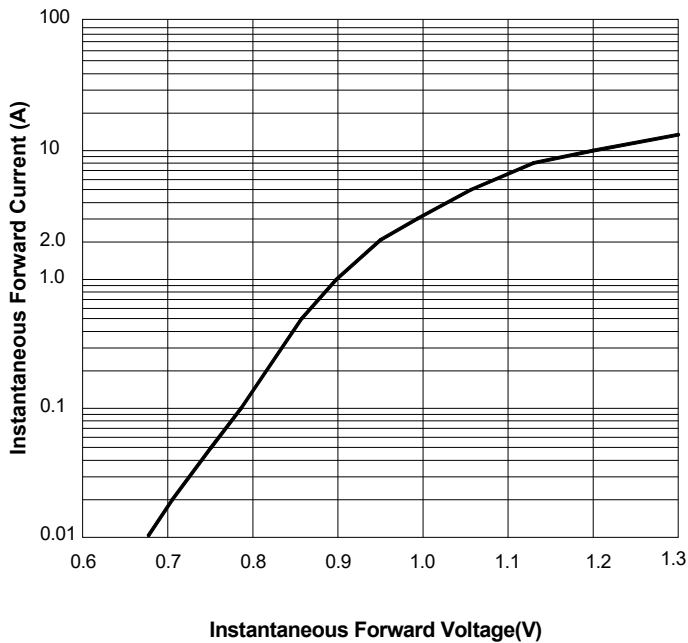
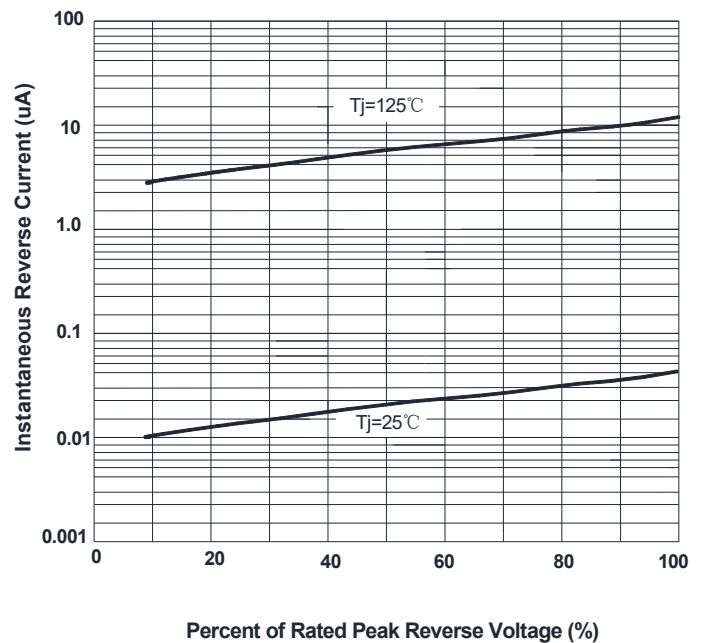
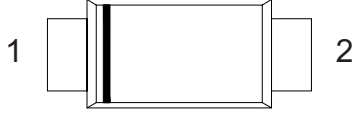



FIG.4: Typical Reverse Characteristics



### Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

### Marking

Type number	Marking code
DSR2A-MHT-F-Q1	S2A
DSR2B-MHT-F-Q1	S2B
DSR2D-MHT-F-Q1	S2D
DSR2G-MHT-F-Q1	S2G
DSR2J-MHT-F-Q1	S2J
DSR2K-MHT-F-Q1	S2K
DSR2M-MHT-F-Q1	S2M

### Suggested solder pad layout



Dimensions in millimeters

SOD-123HT-F	
Dim	Millimeters
P1	0.64
Q1	2.54
Q2	2.67
Q3	1.27
Q4	0.76