Elektronische Bauelemente

SM4001WTCR-C~SM4005WTCR-C

Voltage 50V~600V

1.0 Amp Surface Mount Silicon Rectifiers

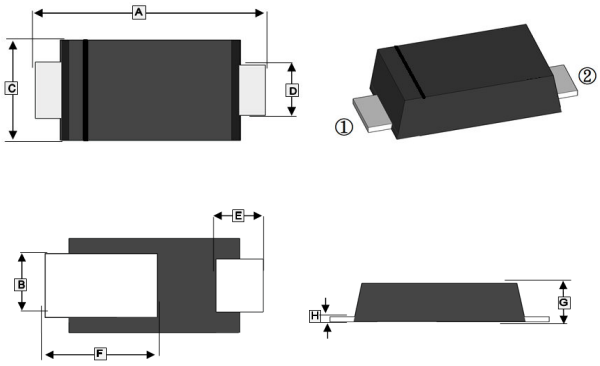
RoHS Compliant Product

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

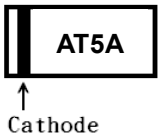
FEATURES

- Heatsink Structure
- Low Profile, Typical Thickness 0.65mm
- Low Forward Voltage Drop
- Low Leakage Current
- Moisture Sensitivity: Level 1, Per J-STD-020
- High Temperature Soldering Guaranteed: 260°C/10 Seconds
- Qualified to AEC-Q101 standards for high reliability

SOD-323WT



MARKING



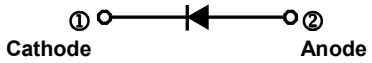
PACKAGE INFORMATION

Package	MPQ	Leader Size
SOD-323WT	15K	13 inch

REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.30	2.70	E	0.4	0.75
B	0.75	1.00	F	1.1	1.5
C	1.20	1.40	G	0.6	0.73
D	0.55	0.75	H	0.1	0.25

ORDER INFORMATION

Part Number	Type
SM4001WTCR-C~SM4005WTCR-C	Lead (Pb)-free and Halogen-free



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise specified)

Parameter		Symbol	Part Number					Unit
			SM4001 WTCR-C	SM4002 WTCR-C	SM4003 WTCR-C	SM4004 WTCR-C	SM4005 WTCR-C	
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	50	100	200	400	600	V
Maximum RMS Voltage		V_{RMS}	35	70	140	280	420	V
Maximum DC Blocking Voltage		V_{DC}	50	100	200	400	600	V
Maximum Average Forward Rectified Current		I_F	1					A
Peak Forward Surge Current @8.3ms Single Half Sine-Wave Superimposed on Rate Load		I_{FSM}	20					A
Maximum Instantaneous Forward Voltage @I_F=1A		V_F	1.1					V
Maximum DC Reverse Current @Rated DC Blocking Voltage	T_A=25°C	I_R	5					μA
	T_A=125°C		50					
Typical Reverse Recovery Time	I_F=0.5A, I_R=1A I_{rr}=0.25A	t_{rr}	1					uS
Typical Junction Capacitance	4V, 1MHz	C_J	4.8					pF
Typical Thermal Resistance from Junction-Ambient [1]		$R_{\theta JA}$	84					°C/W
Typical Thermal Resistance from Junction-Lead [1]		$R_{\theta JL}$	3					
Operating Junction and Storage Temperature		T_J, T_{STG}	-55~150					°C

Note:

1. The thermal resistance from junction to ambient or lead, mounted on P.C.B with 5×5mm copper pads, 2 OZ, FR4 PCB.

CHARACTERISTIC CURVES

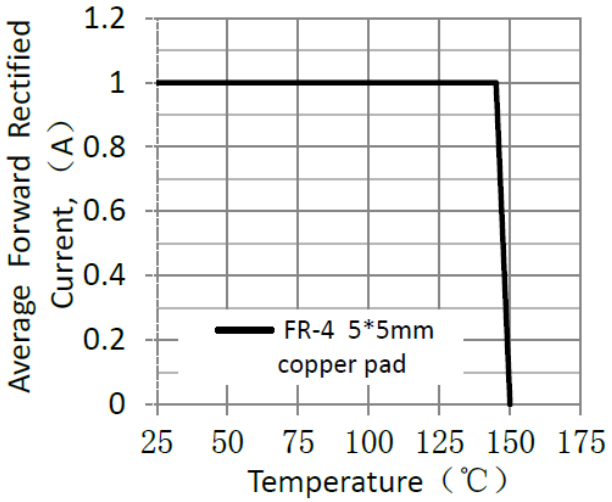


Figure 1.Forward Current Derating Curve

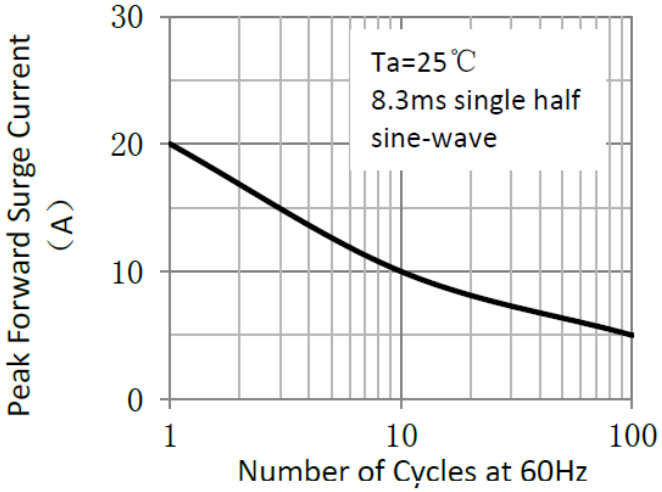


Figure 2.Maximum Non-Repetitive Peak Forward Surge Current

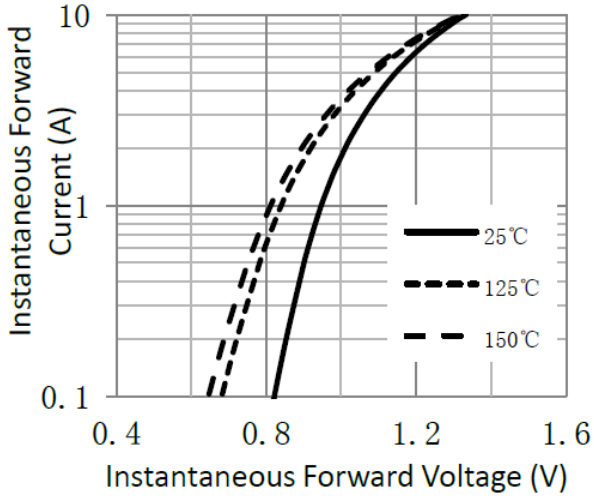


Figure 3. Typical Instantaneous Forward Characteristics

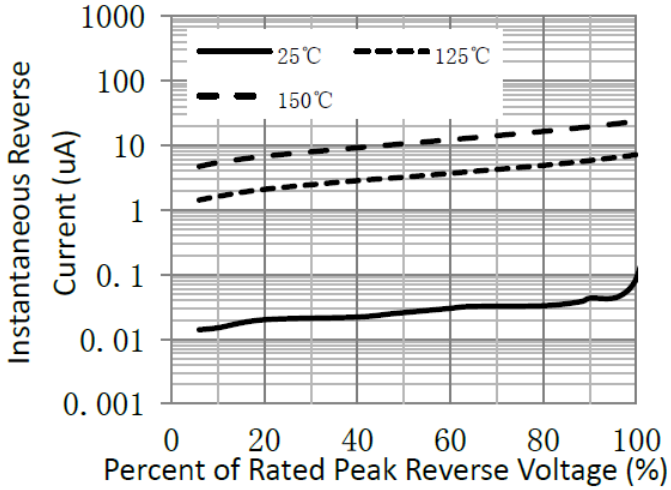


Figure 4. Typical Reverse Characteristics

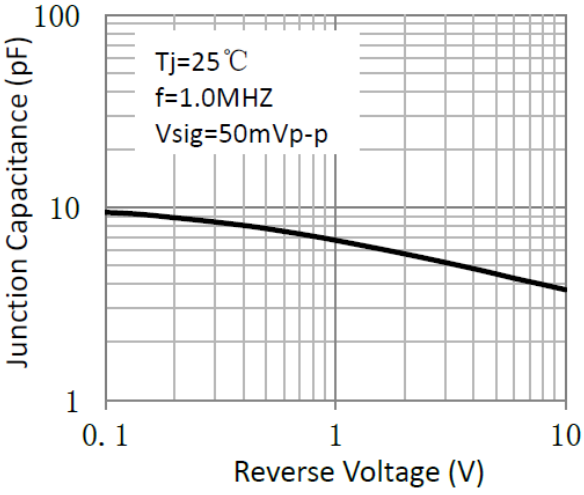


Figure 5. Typical Junction Capacitance