Elektronische Bauelemente

SM220DT-C~SM240DT-C

Voltage 20V~40V

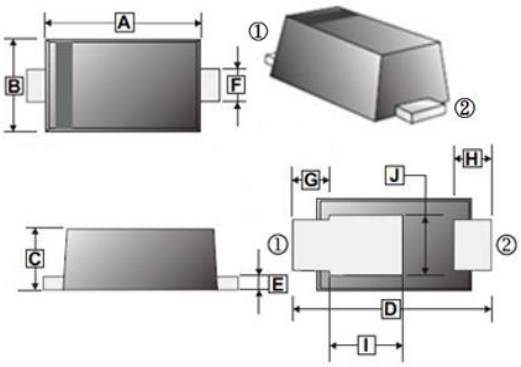
2.0 Amp Surface Mount Schottky Barrier Rectifiers

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

FEATURES

- Heatsink Structure
- Low Profile, Typical Thickness 0.8mm
- Moisture Sensitivity: Level 1, Per J-STD-020
- High Temperature Soldering Guaranteed: 260°C/10 Seconds

SOD-123DT



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.90	3.10	F	0.85	1.05
B	1.90	2.10	G	0.60 REF.	
C	0.75	0.90	H	0.40	0.85
D	3.50	3.90	I	1.66 REF.	
E	0.10	0.25	J	1.30	1.70

Cathode Anode

MARKING

Part Number	SM220DT-C	SM230DT-C	SM240DT-C
Marking	PS22	PS23	PS24

PACKAGE INFORMATION

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

ORDER INFORMATION

Part Number	Type
SM220DT-C~SM240DT-C	Lead (Pb)-free and Halogen-free

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

Parameter		Symbol	Part Number			Unit
			SM220DT-C	SM230DT-C	SM240DT-C	
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	20	30	40	V
Maximum RMS Voltage		V_{RMS}	14	21	28	V
Maximum DC Blocking Voltage		V_{DC}	20	30	40	V
Maximum Average Forward Rectified Current		I_F	2			A
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rate Load		I_{FSM}	50			A
Rating for Fusing (t<8.3ms)		I^2t	10			A^2S
Maximum Instantaneous Forward Voltage @I_F=2A	T_A=25°C	V_F	0.51			V
	T_A=125°C		0.45			
Maximum DC Reverse Current @Rated DC Blocking Voltage	T_A=25°C	I_R	50			uA
	T_A=125°C		10			mA
Typical Junction Capacitance [3]		C_J	115			pF
Typical Thermal Resistance from Junction-Ambient [1]		$R_{\theta JA}$	60			°C/W
Typical Thermal Resistance from Junction-Case [2]		$R_{\theta JC}$	28			
Typical Thermal Resistance from Junction-Lead [1]		$R_{\theta JL}$	6			
Operating Junction & Storage Temperature		T_J, T_{STG}	-55~150			°C

Notes:

1. The thermal resistance from junction to ambient or lead, mounted on P.C.B with 5×5mm copper pads, 2oz, FR-4 PCB.
2. The thermal resistance from junction to case, mounted on P.C.B with recommended copper pads, 2oz, FR-4 PCB.
3. Measured at 1MHz and applied reverse voltage of 4V D.C.

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CHARACTERISTIC CURVES

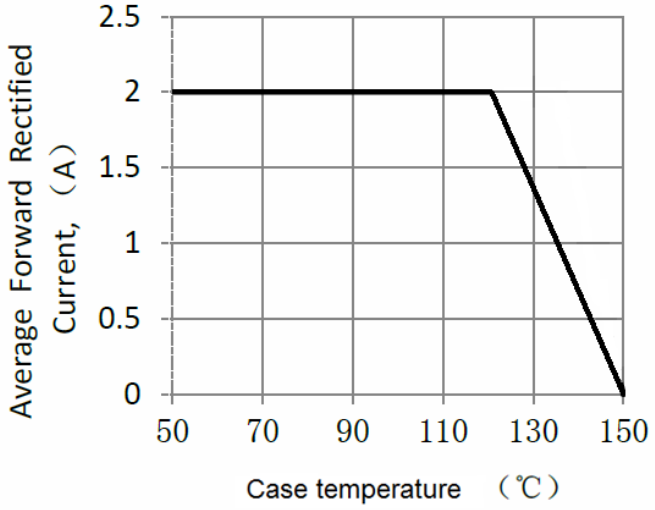


Figure 1.Forward Current Derating Curve

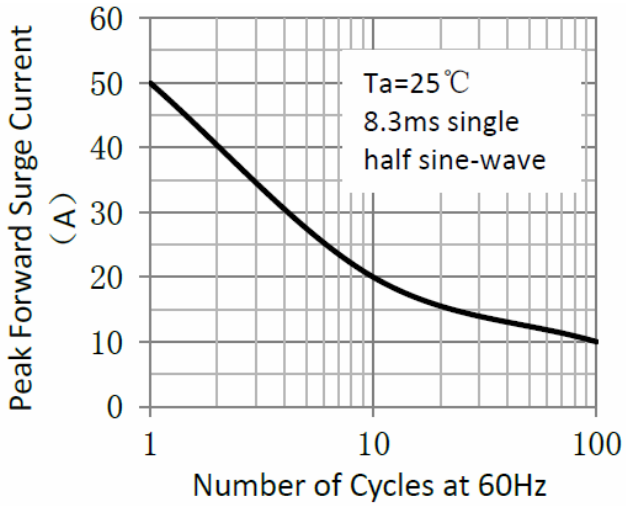


Figure 2.Maximum Non-Repetitive Peak Forward Surge Current

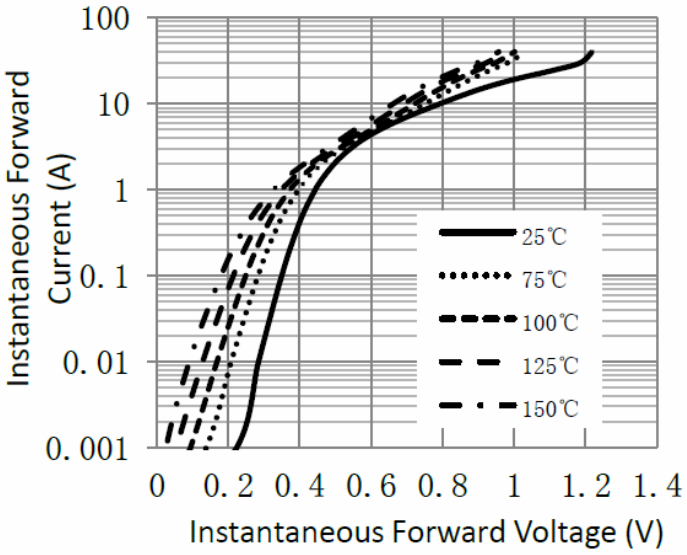


Figure 3. Typical Instantaneous Forward Characteristics

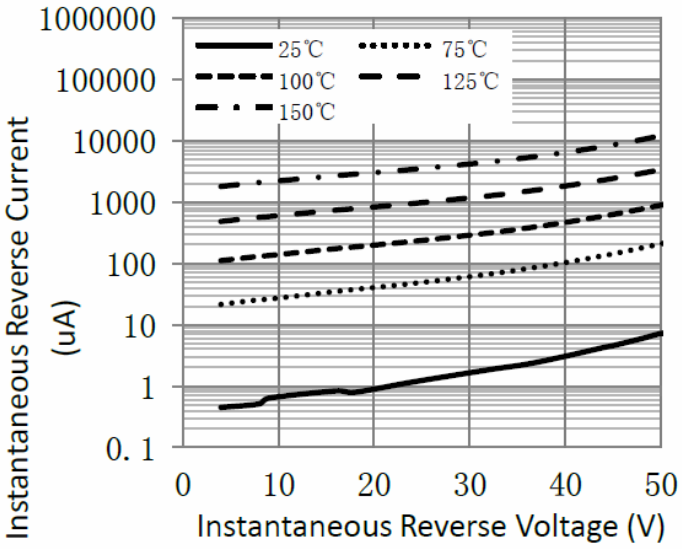


Figure 4. Typical Reverse Characteristics

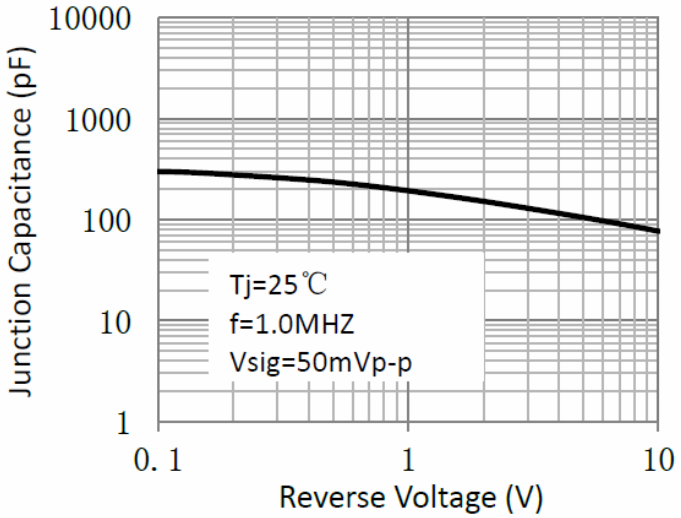
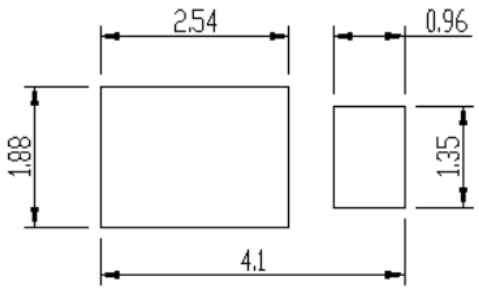


Figure 5. Typical Junction Capacitance



*Dimensions in millimeters

Figure 6. Mounting Pad Layout