Elektronische Bauelemente

SM140PT

40V

1.0 Amp Surface Mount Schottky Barrier Rectifiers

RoHS Compliant Product

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

FEATURES

- Schottky barrier rectifier
- Guardring protection
- Low forward voltage
- Reverse energy tested

MECHANICAL DATA

- Case: SOD-323T molded plastic body
- Polarity: Color band denotes cathode end
- Mounting position: Any

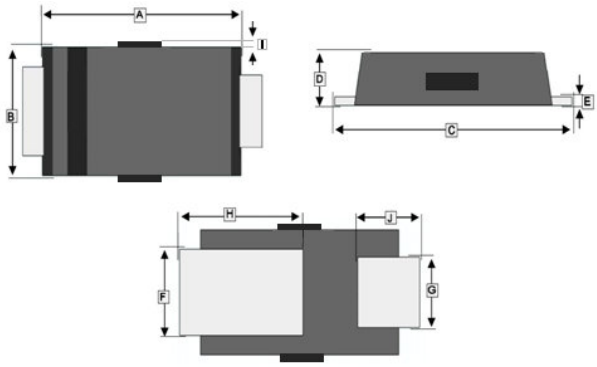
MARKING CODE

KC
EV

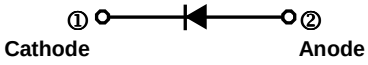
PACKAGE INFORMATION

Package	MPQ	Leader Size
SOD-323T	3K	7’ inch

SOD-323T



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.75	2.30	F	0.65	0.98
B	1.20	1.40	G	0.45	0.75
C	2.30	2.70	H	1.10	1.55
D	0.55	0.75	J	0.40	0.80
E	0.10	0.30			



MAXIMUM RATINGS (T_A=25℃ unless otherwise specified.)

Parameter	Symbol	Rating	Unit
Recurrent Peak Reverse Voltage	V_{RRM}	40	V
RMS Voltage	V_{RMS}	28	V
Reverse Voltage	V_R	40	V
Forward Rectified Current	$I_{F(AV)}$	1	A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	22	A
Typical Thermal Resistance, Junction to Lead[1]	$R_{\theta JL}$	40	℃/W
Typical Thermal Resistance, Junction to Ambient[2]	$R_{\theta JA}$	280	℃/W
Operating and Storage Temperature Range	T_J,T_{STG}	-55 ~ 150	℃

Note:

1. Mounted on an FR-4 PCB, single-sided copper, with 48cm^2 copper pad area.
2. Mounted on an FR-4 PCB, single-sided copper, mini pad.

ELECTRICAL CHARACTERISTICS

Parameter			Symbol	Rating			Unit
				Min.	Typ.	Max.	
Breakdown Voltage @ I_R=1mA			V_{BR}	40	-	-	V
Forward Voltage	I_F=0.7A	T_A=25°C	V_F	-	0.49	-	V
	I_F=1A			-	0.52	0.58	
	I_F=0.7A	T_A=125°C		-	0.4	-	
	I_F=1A			-	0.44	-	
Reverse Current (Max.)	V_R=32V	T_A=25°C	I_R	-	0.8	-	μA
	V_R=40V			-	-	50	
	V_R=40V	T_A=125°C		-	0.8	-	mA

CHARACTERISTIC CURVES

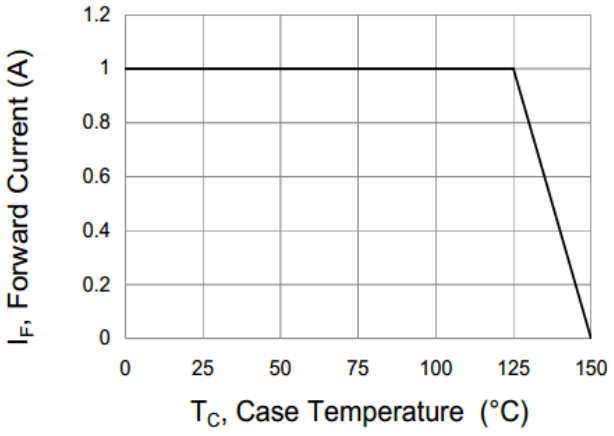


Fig.1 Forward Current Derating Curve

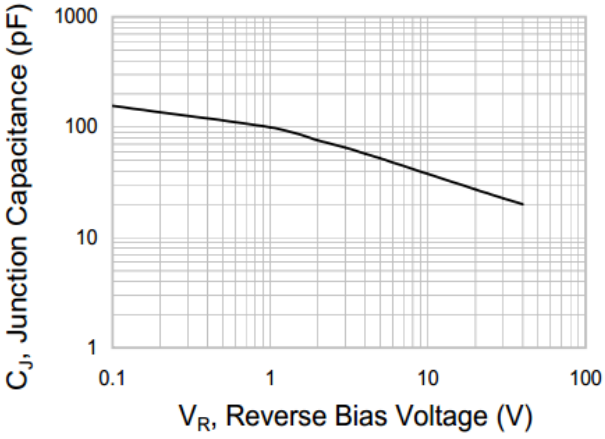


Fig.2 Typical Junction Capacitance

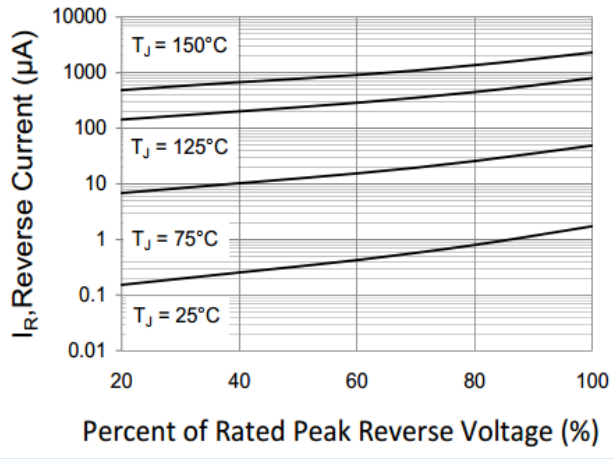


Fig.3 Typical Reverse Characteristics

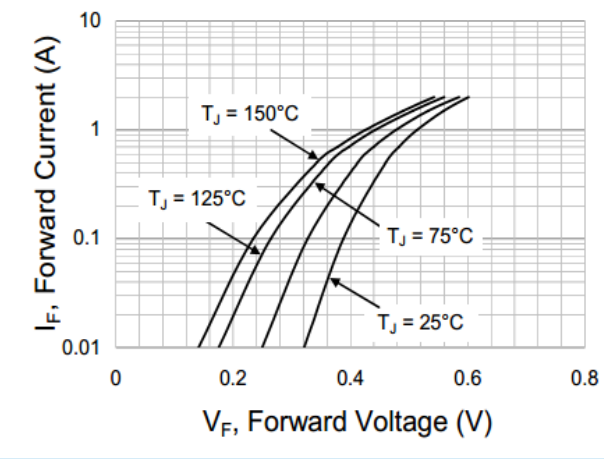


Fig.4 Typical Forward Characteristics