

Features

- High Surge Forward Current Capability
- Low Forward Voltage Drop and Low Power Losses
- Lead Free Finish/RoHS Compliant (Note 1) ("P" Suffix Designates RoHS Compliant. See Ordering Information)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free. "Green" Device (Note 2)
- Moisture Sensitivity Level 1

5 Amp Low VF Schottky Rectifier 60 Volts

Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	60	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
RMS Reverse Voltage	V_{RMS}	42	V
Average Rectified Forward Current @ $T_C=105^\circ\text{C}$	$I_{F(AV)}$	5	A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	I_{FSM}	120	A
Current Squared Time @ $1\text{ms} \leq t \leq 8.3\text{ms}$	I^2t	60	A^2s

SMBF

The drawing shows three views of the SMBF package: a top view with dimensions C and A, a side view with dimensions B and A, and a bottom view with dimensions D, E, F, and G. A vertical black bar on the top view is labeled 'Cathode Mark'.

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.134	0.150	3.40	3.80	
B	0.075	0.083	1.90	2.10	
C	0.163	0.175	4.15	4.45	
D	0.201	0.220	5.10	5.60	
E	0.041	0.061	1.05	1.55	
F	0.028	0.053	0.70	1.35	
G	0.006	0.010	0.15	0.25	

Suggested Solder Pad Layout

The diagram shows two rectangular solder pads. The first pad has a width of 1.9mm and a height of 2.2mm. The distance between the centers of the two pads is 4.3mm.

Internal Structure

Pin	Description	Simplified outline	Graphic symbol
1	cathode		
2	anode		

Note:

1. High temperature solder exemption applied, see EU directive annex 7a.
2. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Thermal characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
T_J	Operating Junction Temperature Range		-55		150	°C
T_{stg}	Storage Temperature Range		-55		150	°C
$R_{th(J-C)}$	Thermal Resistance from Junction to Case	Note 1		15		°C/W
$R_{th(J-L)}$	Thermal Resistance from Junction to Lead	Note 1		25		°C/W
$R_{th(J-A)}$	Thermal Resistance from Junction to Ambient	Note 1		65		°C/W

Note:

1. Mounted on P.C.B. with 5mm*5mm copper pad areas.

Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	V_F	$I_F=5A; T_J=25^{\circ}C$ $I_F=5A; T_J=125^{\circ}C$			0.50 0.47	V
Reverse Current	I_R	at Rated $V_R; T_J=25^{\circ}C$ at Rated $V_R; T_J=125^{\circ}C$			0.5 50	mA
Junction Capacitance	C_J	$V_R=4V; f=1MHz; T_J=25^{\circ}C$		270		pF

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

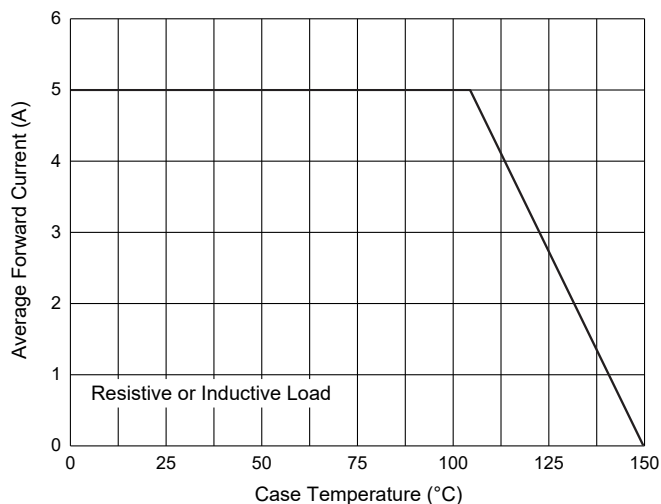


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

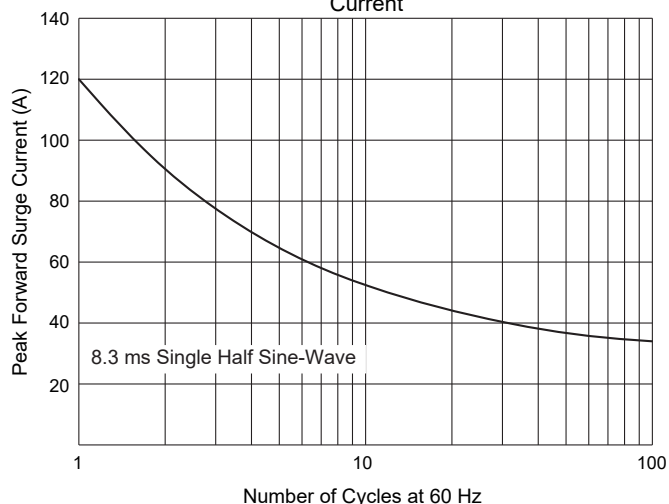


Fig. 3 - Typical Forward Characteristics

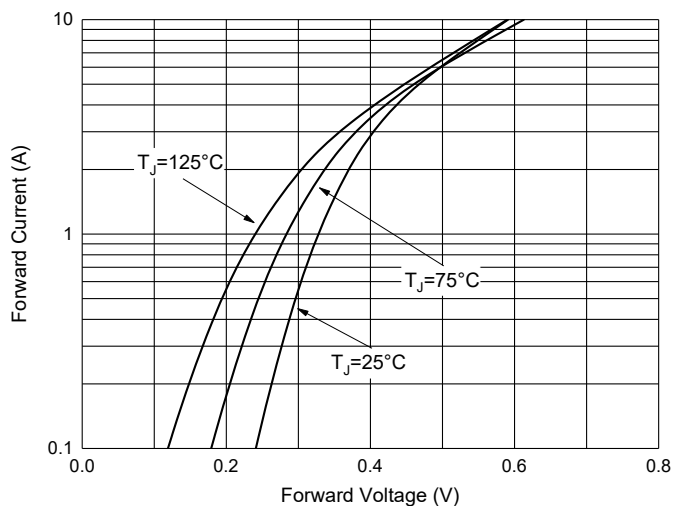


Fig. 4 - Typical Reverse Leakage Characteristics

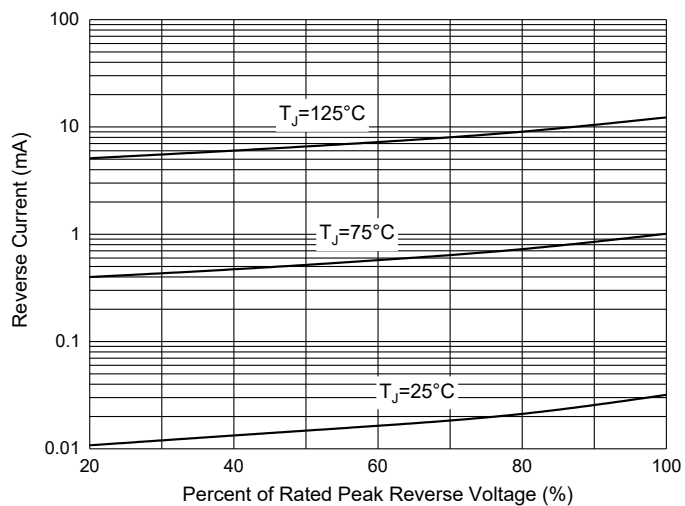
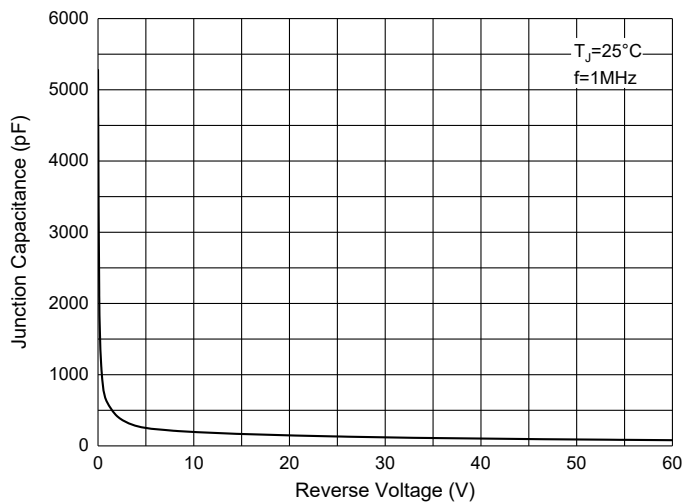


Fig. 5 - Typical Capacitance Characteristics



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel:5Kpcs/Reel

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