MOSPEC

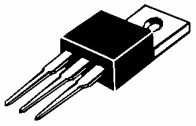
S20T150CB

Schottky Barrier Rectifiers

Using the Schottky Barrier principle with a Refractory metal capable of high temperature operation metal. The proprietary barrier technology allows for reliable operation up to 150℃ junction temperature. Typical application are in switching Mode Power Supplies such as adaptors, DC/DC converters, free-wheeling and polarity protection diodes.

SCHOTTKY BARRIER RECTIFIERS

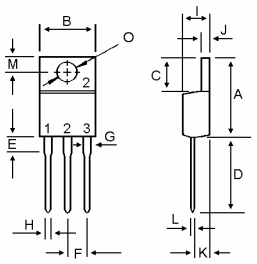
20 AMPERES
150 VOLTS



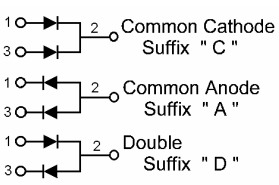
TO-220AB

Features

- ∗Low Forward Voltage.
- ∗Low Switching noise.
- ∗High Current Capacity
- ∗Guarantee Reverse Avalanche.
- ∗Guard-Ring for Stress Protection.
- ∗Low Power Loss & High efficiency.
- ∗175℃ Operating Junction Temperature
- ∗Low Stored Charge Majority Carrier Conduction.
- ∗Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O
- ∗*In compliance with EU RoHs 2002/95/EC directives*
- ∗Mounting Torqure: 5 in-lbs.Max



DIM	MILLIMETERS	
	MIN	MAX
A	14.68	15.32
B	9.78	10.42
C	5.02	6.52
D	13.06	14.62
E	3.57	4.07
F	2.42	2.66
G	1.12	1.36
H	0.72	0.96
I	4.22	4.98
J	1.14	1.38
K	2.20	2.98
L	0.33	0.55
M	2.48	2.98
O	3.70	3.90



MAXIMUM RATINGS

Characteristic	Symbol	S20T150CB	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	150	V
RMS Reverse Voltage	$V_{R(RMS)}$	105	V
Average Rectifier Forward Current (per diode) Total Device (Rated V_R),	$I_{F(AV)}$	10 20	A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfware, single phase, 60Hz)	I_{FSM}	250	A
Operating and Storage Junction Temperature Range	T_J , T_{stg}	-65 to +150	℃

THERMAL RESISTANCES

Typical Thermal Resistance junction to case (per device)	$R_{\theta jc}$	3.6	℃/w

ELECTRIAL CHARACTERISTICS

Characteristic	Symbol	Min	Typ.	Max	Unit
Maximum Instantaneous Forward Voltage (per diode)	V_F				V
(I_F =0.1 Amp T_C = 25℃)		---	0.38	0.40	
(I_F =5.0 Amp T_C = 25℃)		---	0.70	0.72	
(I_F =10 Amp T_C = 25℃)		---	0.77	0.80	
Maximum Instantaneous Reverse Current	I_R				mA
(Rated DC Voltage, T_C = 25℃)		---	0.003	0.01	
(Rated DC Voltage, T_C = 125℃)		---	5	7	

S20T150CB

FIG-1 FORWARD CURRENT DERATING CURVE

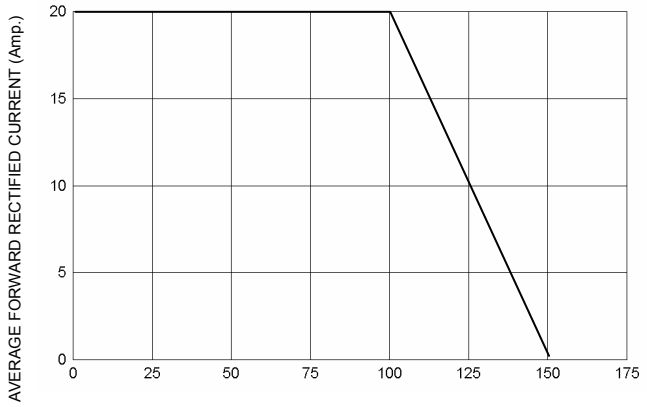


FIG-2 TYPICAL FORWARD CHARACTERISITICS

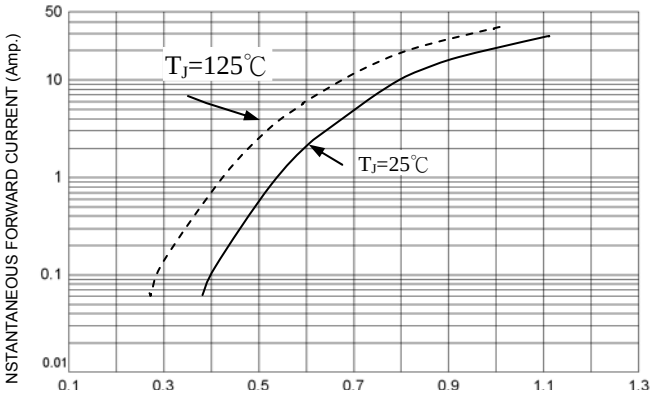


FIG-3 TYPICAL REVERSE CHARACTERISTICS

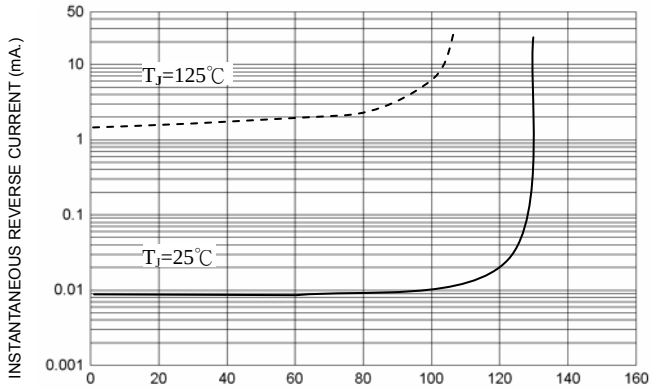


FIG-4 TYPICAL JUNCTION CAPACITANCE

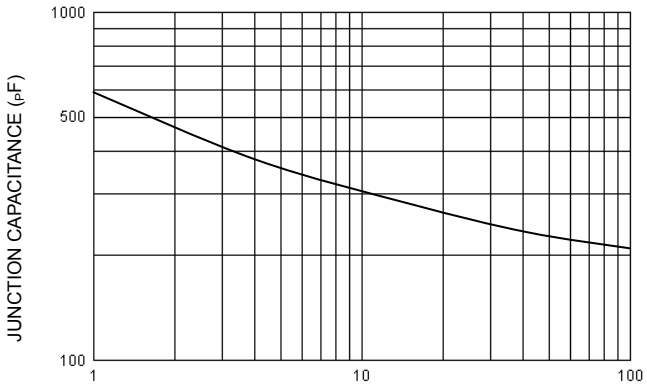


FIG-5 PEAK FORWARD SURGE CURRENT