MOSPEC

SBD10200CT

SWITCHMODE POWER RECTIFIERS
D-PAK SURFACE MOUNT POWER PACKAGE

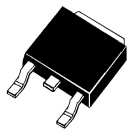
The D-PAK Power rectifier employs the Schottky Barrier principle with a Molybdenum barrier metal. These state-of-the-art devices have the following.

FEATURES：
- ∗Low Forward Voltage.
- ∗High Surge 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 directives

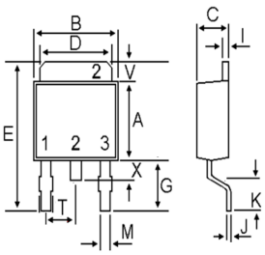
MECHANICAL DATA：
- ・Case：Molded plastic body
- ・Marking Code：S1020T

SCHOTTKY BARRIER RECTIFIERS

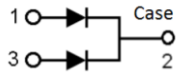
10 AMPERES
200 VOLTS



TO-252



DIM	MILLIMETERS	
	MIN	MAX
A	5.97	6.22
B	6.30	6.75
C	2.18	2.40
D	4.95	5.46
E	9.40	10.41
G	2.75	3.20
I	0.46	0.89
J	0.46	0.61
K	1.40	1.78
M	0.64	0.89
T	2.28	2.30
V	0.89	1.27
X	---	1.05



MAXIMUM RATINGS

Characteristic	Symbol	SBD10200CT	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	200	V
RMS Reverse Voltage	$V_{R(RMS)}$	140	V
Average Rectifier Forward Current (per diode) Total Device (Rated V_R)	$I_{F(AV)}$	5 10	A
Peak Repetitive Forward Current (Rate V_R, Square Wave, 20kHz)	I_{FM}	10	A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions half-ware, single phase, 60Hz)	I_{FSM}	125	A
Operating and Storage Junction Temperature Range	T_J , T_{stg}	-55 to +175	℃

THERMAL RESISTANCES

Typical Thermal Resistance junction to body	$R_{\theta jc}$	3.8	℃/w

ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Maximum Instantaneous Forward Voltage (per diode) (I_F =5.0 Amp T_C = 25℃) (I_F =5.0 Amp T_C = 125℃)	V_F	--- ---	0.82 0.69	0.90 ---	V
Maximum Instantaneous Reverse Current (Rated DC Voltage, T_C = 25℃) (Rated DC Voltage, T_C = 125℃)	I_R	--- ---	0.02 0.1	10 ---	uA mA

FIG-1 TYPICAL FORWARD CURRENT DERATING CURVE

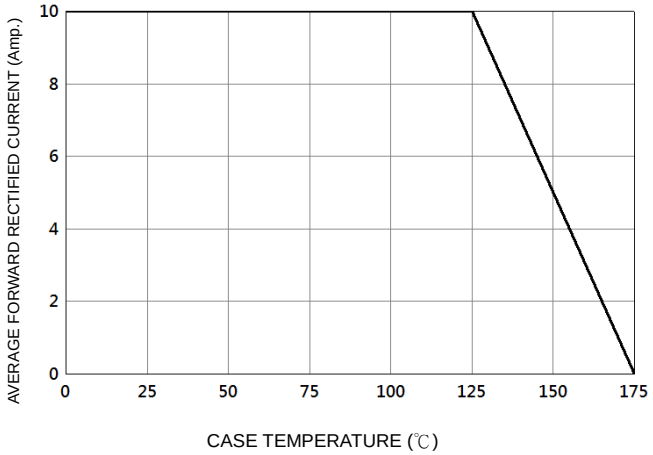


FIG-2 TYPICAL FORWARD CHARACTERISTICS

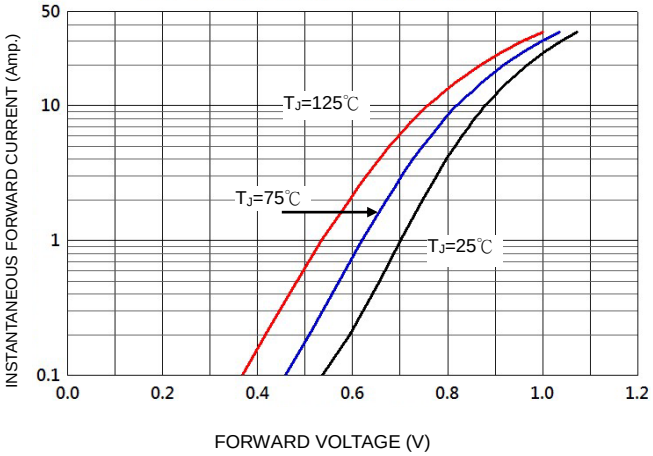


FIG-3 TYPICAL REVERSE CHARACTERISTICS

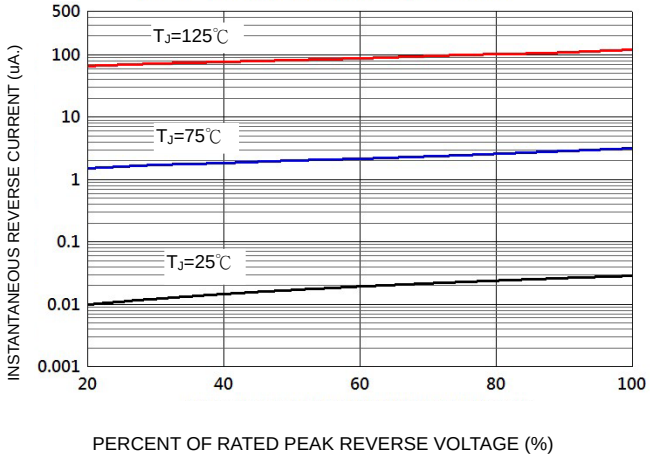


FIG-4 TYPICAL JUNCTION CAPACITANCE

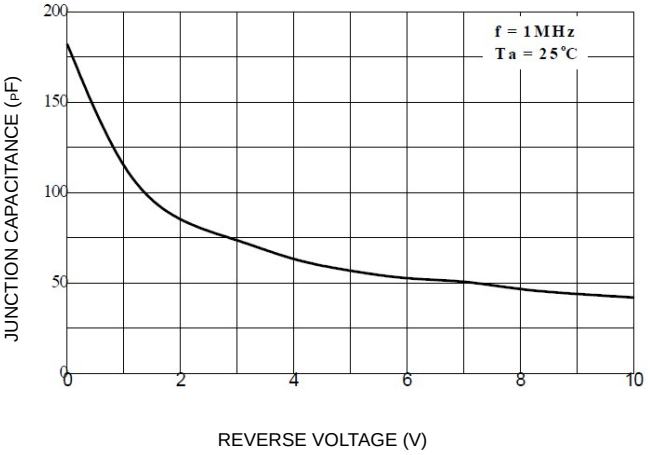
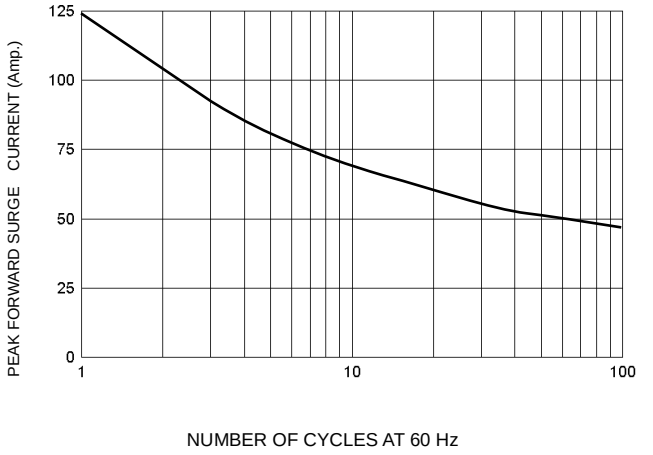


FIG-5 TYPICAL PEAK FORWARD SURGE CURRENT



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