MOSPEC

SBD2030CT thru SBD2045CT

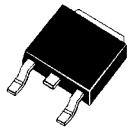
SWITCH MODE POWER RECTIFIERS
D PAK SURFACE MOUNT POWER PACKAGE

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:

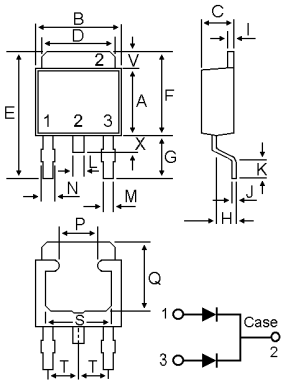
- ✳Low Forward Voltage
- ✳Low Switching noise
- ✳High Surge Capacity
- ✳Guarantee Reverse Avalanche
- ✳Guard-Ring for Stress Protection
- ✳Lower Power Loss & High efficiency
- ✳150℃ Operating Junction Temperature
- ✳Lower Stored Charge Majority Carrier Conduction
- ✳Similar Size to the industry Standard TO-251 Package
- ✳Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O
- ✳Marking: S1630T-S1645T
- ✳Weight: 0.011 ounce, 0.295 gram

SCHOTTKY BARRIER RECTIFIERS

20 AMPERES
30-45 VOLTS



TO-252AA (D PAK)



DIM	MILLIMETERS	
	MIN	MAX
A	5.40	5.60
B	6.30	6.70
C	2.20	2.40
D	5.20	5.50
E	9.00	10.00
F	6.60	7.00
G	2.40	3.00
H	0.90	1.50
I	0.45	0.55
J	0.45	0.60
K	0.90	1.50
L	0.70	0.90
M	0.50	0.70
N	0.60	0.90
P	2.70	3.10
Q	5.00	5.40
S	4.80	5.20
T	-----	2.30
V	1.20	1.40
X	0.80	1.20

MAXIMUM RATINGS

Characteristic	Symbol	SBD				Unit
		1630CT	1635CT	1640CT	1645CT	
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	30	35	40	45	V
RMS Reverse Voltage	$V_{R(RMS)}$	21	25	28	32	V
Average Rectifier Forward Current (per diode) Total Device (Rated V_R), T_C=100℃	$I_{F(AV)}$	10 20				A
Peak Repetitive Forward Current (Rate V_R, Square Wave, 20kHz)	I_{FM}	20				A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfware, single phase, 60Hz)	I_{FSM}	175				A
Operating and Storage Junction Temperature Range	T_J , T_{stg}	-65 to +150				℃

ELECTRIAL CHARACTERISTICS

Characteristic	Symbol	SBD				Unit
		2030CT	2035CT	2040CT	2045CT	
Maximum Instantaneous Forward Voltage (I_F =10 Amp, T_C = 25℃)	V_F	0.55				V
Maximum Instantaneous Reverse Current (Rated DC Voltage, T_C = 25℃) (Rated DC Voltage, T_C = 125℃)	I_R	0.5 20				mA

SBD2030CT thru SBD2045CT

FIG-1 FORWARD CURRENT DERATING CURVE

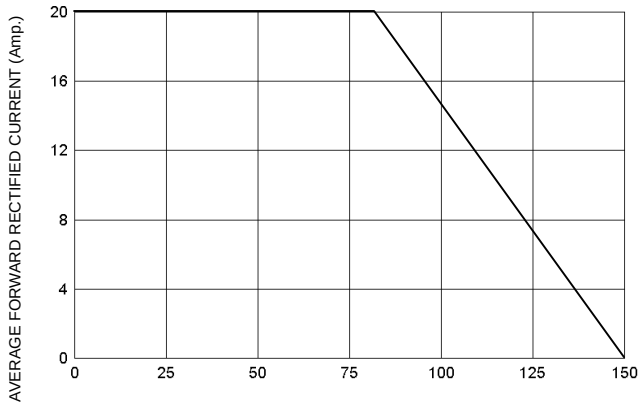


FIG-2 TYPICAL FORWARD CHARACTERISITICS

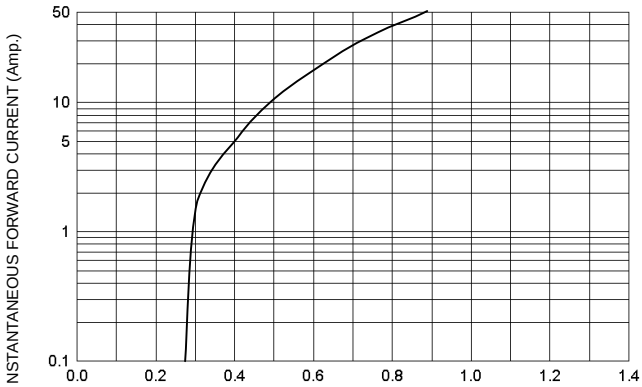


FIG-3 TYPICAL REVERSE CHARACTERISTICS

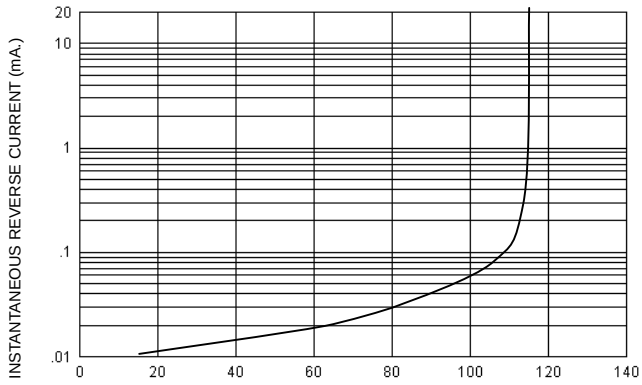


FIG-4 TYPICAL JUNCTION CAPACITANCE

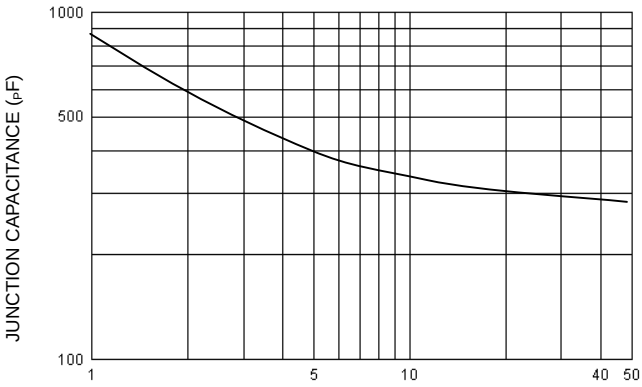
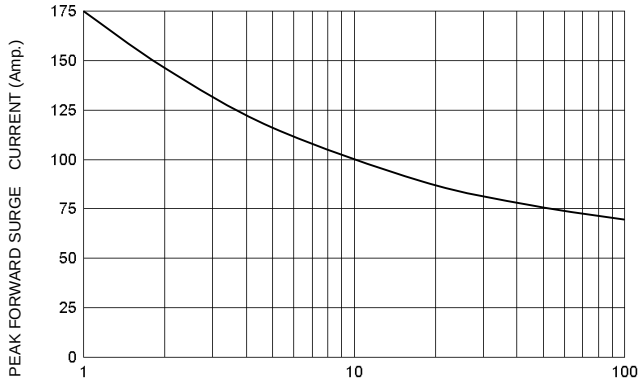


FIG-5 PEAK FORWARD SURGE CURRENT



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