

## SWITCH MODE POWER RECTIFIERS D PAK SURFACE MOUNT POWER PACKAGE

Using the Schottky Barrier principle with a Refractory metal capable of high temperature operation metal. These state-of-the-art devices have the following features:

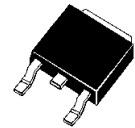
### Features

- \* Ultra Low Forward Voltage.
- \* Low Switching noise.
- \* High Current Capacity
- \* Low Power Loss & High efficiency.
- \* 150°C Operating Junction Temperature
- \* Low Stored Charge Majority Carrier Conduction.
- \* Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O
- \* Marking: S20DT100T
- \* In compliance with EU RoHs directives



### SCHOTTKY BARRIER RECTIFIERS

**20 AMPERES  
100 VOLTS**



**TO-252AA**

### MAXIMUM RATINGS

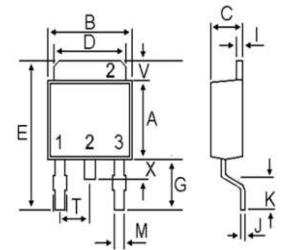
Characteristic	Symbol	S20DT100CT	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	100	V
RMS Reverse Voltage	$V_{R(RMS)}$	70	V
Average Rectifier Forward Current ( per diode ) Total Device (Rated $V_R$ ),	$I_{F(AV)}$	10 20	A
Peak Repetitive Forward Current (Rate $V_R$ , Square Wave, 20kHz)	$I_{FM}$	20	A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions half-wave, single phase, 60Hz)	$I_{FSM}$	200	A
Operating and Storage Junction Temperature Range	$T_J, T_{stg}$	-65 to +150	°C

### THERMAL RESISTANCES

Typical Thermal Resistance junction to body	$R_{\theta jc}$	6.8	°C/w
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### ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Maximum Instantaneous Forward Voltage ( $I_F = 10$ Amp $T_C = 25^\circ C$ ) ( $I_F = 10$ Amp $T_C = 125^\circ C$ )	$V_F$	---	0.66 0.61	0.72 ---	V
Maximum Instantaneous Reverse Current ( Rated DC Voltage, $T_C = 25^\circ C$ ) ( Rated DC Voltage, $T_C = 125^\circ C$ )	$I_R$	---	0.02 7.0	0.05 ---	mA



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

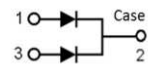


FIG-1 FORWARD CURRENT DERATING CURVE

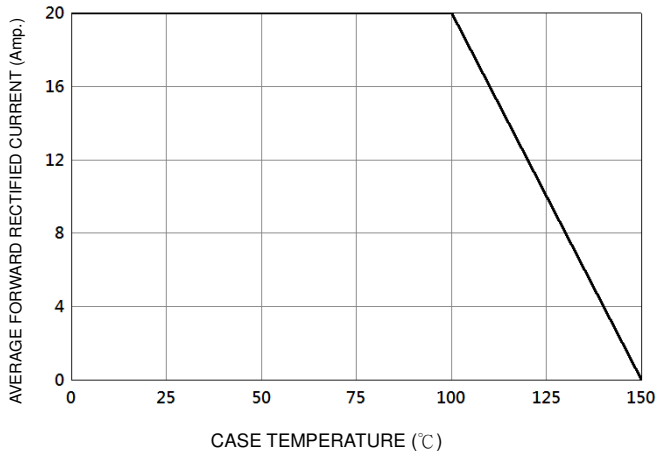


FIG-2 TYPICAL FORWARD CHARACTERISTICS

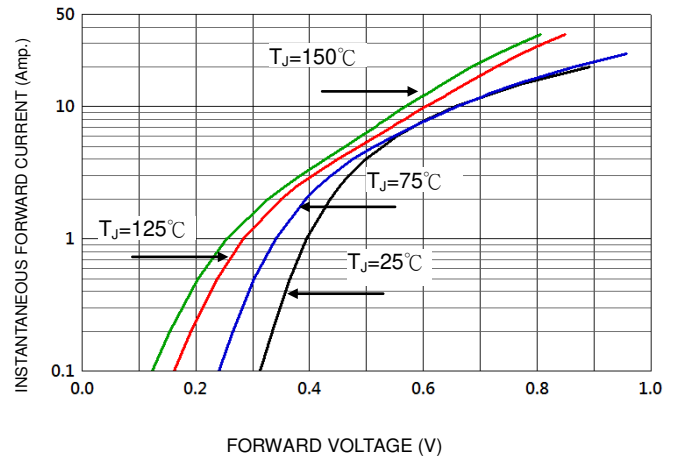


FIG-3 TYPICAL REVERSE CHARACTERISTICS

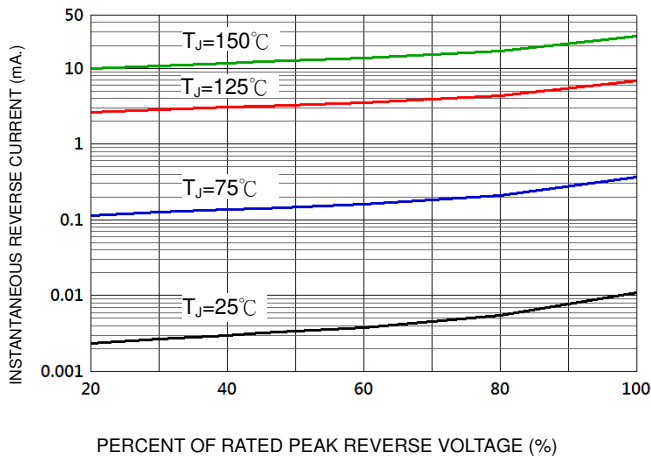


FIG-4 TYPICAL JUNCTION CAPACITANCE

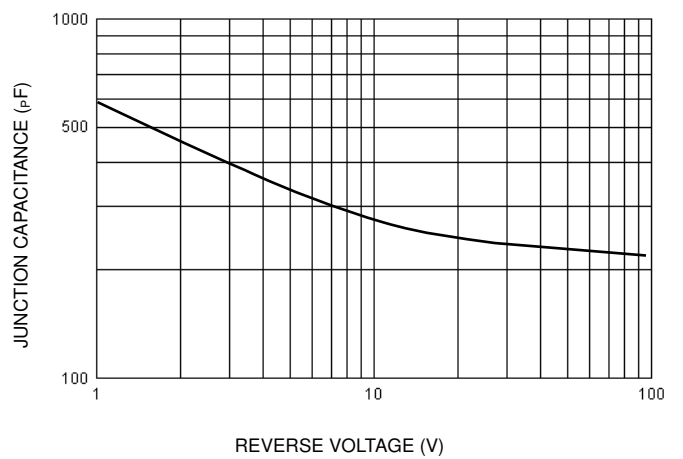
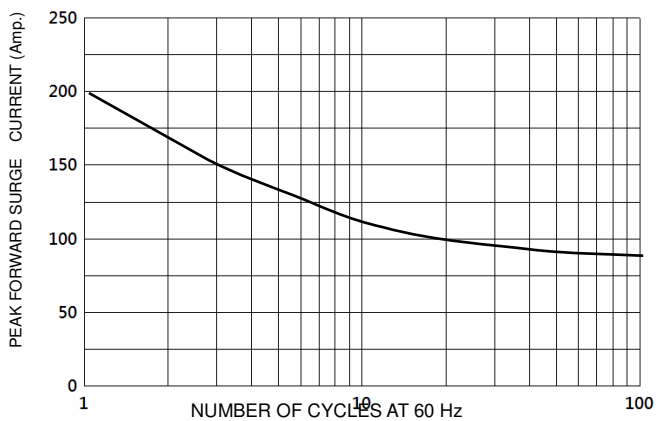


FIG-5 PEAK FORWARD SURGE CURRENT



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