

## Schottky Barrier Rectifiers

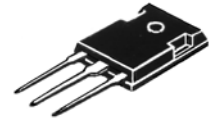
Using the Schottky Barrier principle with a Molybdenum barrier metal. These state-of-the-art geometry features epitaxial construction with oxide passivation and metal overlay contact. Ideally suited for low voltage, high frequency rectification, or as free wheeling and polarity protection diodes.

- \* Low Forward Voltage.
- \* Low Switching noise.
- \* High Current Capacity
- \* Guarantee Reverse Avalanche.
- \* Guard-Ring for Stress Protection.
- \* 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
- \* **Pb free**
- \* **In compliance with EU RoHs directives**



### SCHOTTKY BARRIER RECTIFIERS

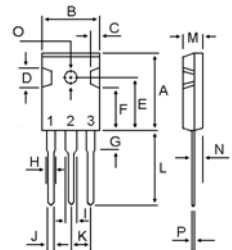
**40 AMPERES  
100 VOLTS**



**TO-3P**

## MAXIMUM RATINGS

Characteristic	Symbol	S40D100C	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 Total Device (Rated $V_R$ ), $T_C=100^\circ\text{C}$	$I_{F(AV)}$	20 40	A
Peak Repetitive Forward Current (Rate $V_R$ , Square Wave, 20kHz)	$I_{FM}$	40	A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfwave, single phase, 60Hz)	$I_{FSM}$	300	A
Operating and Storage Junction Temperature Range	$T_J, T_{STG}$	-65 to +150	$^\circ\text{C}$



DIM	MILLIMETERS	
	MIN	MAX
A	20.80	21.80
B	15.38	16.20
C	1.90	2.70
D	5.10	6.10
E	14.81	15.22
F	11.72	12.84
G	3.75	4.35
H	1.90	2.30
I	2.90	3.30
J	1.00	1.40
K	5.26	5.66
L	19.50	20.50
M	4.68	5.36
N	2.40	2.80
O	3.25	3.65
P	0.48	0.72

## ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Maximum Instantaneous Forward Voltage ( $I_F=20$ Amp $T_C=25^\circ\text{C}$ ) ( $I_F=20$ Amp $T_C=125^\circ\text{C}$ )	$V_F$	---	0.79 0.65	0.85 ---	V
Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_C=25^\circ\text{C}$ ) (Rated DC Voltage, $T_C=125^\circ\text{C}$ )	$I_R$	---	0.005 8	1.0 ---	mA

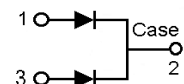


FIG-1 FORWARD CURRENT DERATING CURVE

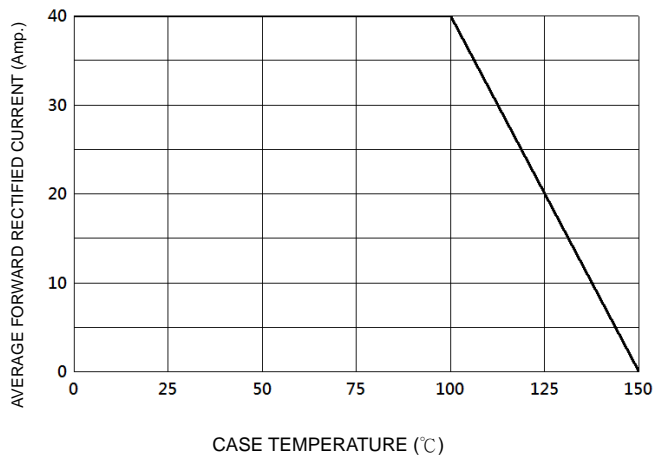


FIG-2 TYPICAL FORWARD CHARACTERISTICS

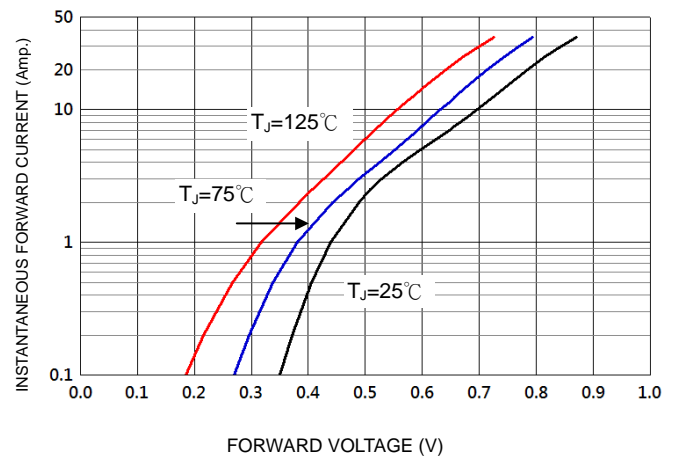


FIG-3 TYPICAL REVERSE CHARACTERISTICS

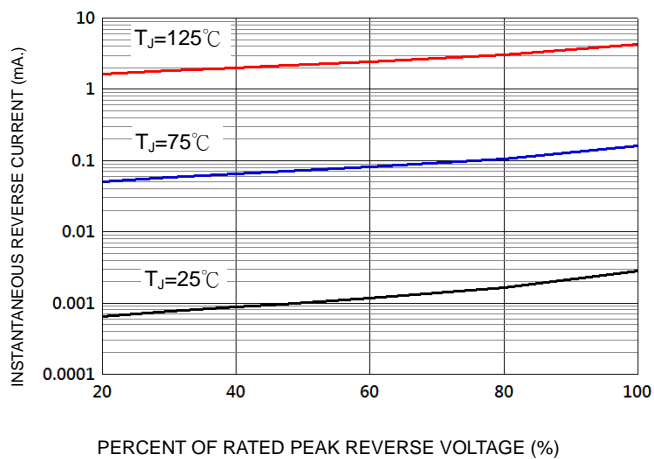


FIG-4 TYPICAL JUNCTION CAPACITANCE

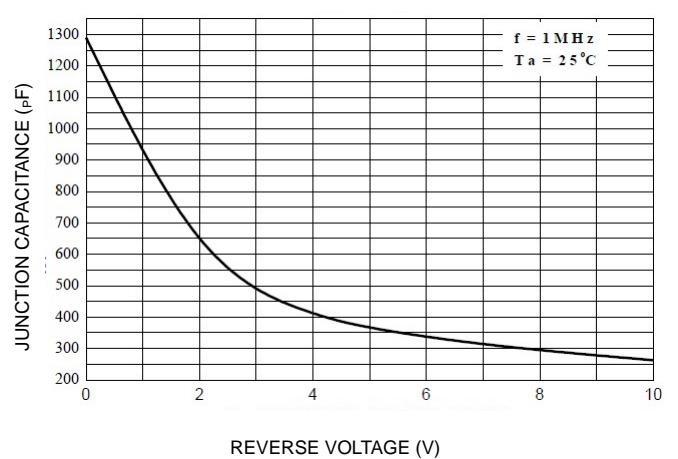
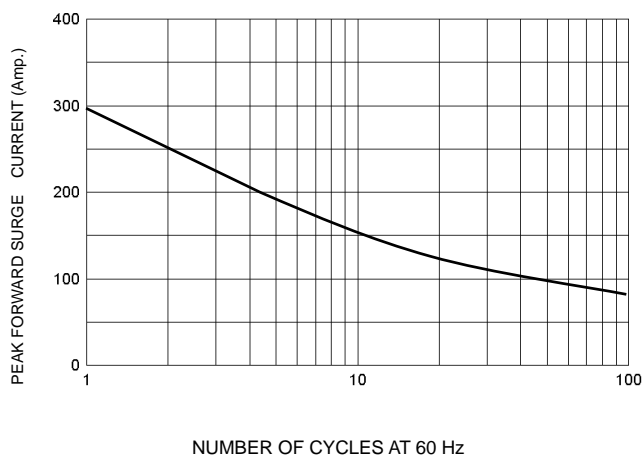


FIG-5 PEAK FORWARD SURGE CURRENT



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