

### 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.

#### Features

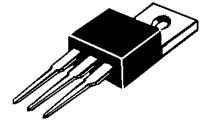
- \* Low Forward Voltage.
- \* Low Switching noise.
- \* High Current Capacity
- \* Guarantee Reverse Avalanche.
- \* Guard-Ring for Stress Protection.
- \* Low Power Loss & High efficiency.
- \* 150 Operating Junction Temperature
- \* Low Stored Charge Majority Carrier Conduction.
- \* Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O



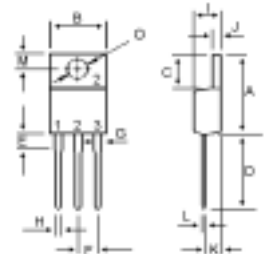
- \* ESD: 4KV(Min.) Human-Body Model
- \* In compliance with EU RoHs 2002/95/EC directives

#### SCHOTTKY BARRIER RECTIFIERS

**20 AMPERES  
30-60 VOLTS**



**TO-220AB**



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

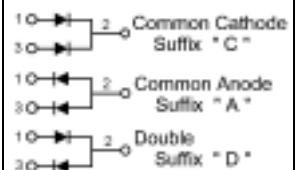
Characteristic	Symbol	S20C						Unit
		30	35	40	45	50	60	
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	30	35	40	45	50	60	V
RMS Reverse Voltage	$V_{R(RMS)}$	21	25	28	32	35	42	V
Average Rectifier Forward Current (Per diode) Total Device (Rated $V_R$ ), $T_C=125$	$I_{F(AV)}$	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 halfwave, single phase, 60Hz)	$I_{FSM}$	200						A
Operating and Storage Junction Temperature Range	$T_J, T_{stg}$	-65 to +150						

### THERMAL RESISTANCES

Typical Thermal Resistance junction to case Per diode	$R_{\theta jc}$	3.8	/w
Total		3.4	
Coupling	$R_{\theta c}$	3.0	

### ELECTRIAL CHARACTERISTICS

Characteristic	Symbol	S20C						Unit
		30	35	40	45	50	60	
Maximum Instantaneous Forward Voltage ( $I_F=10$ Amp $T_C=25$ ) ( $I_F=10$ Amp $T_C=100$ )	$V_F$	0.55			0.70			V
		0.48			0.60			
Maximum Instantaneous Reverse Current ( Rated DC Voltage, $T_C=25$ ) ( Rated DC Voltage, $T_C=100$ )	$I_R$	0.5			20			mA



# S20C30 Thru S20C60

FIG-1 FORWARD CURRENT DERATING CURVE

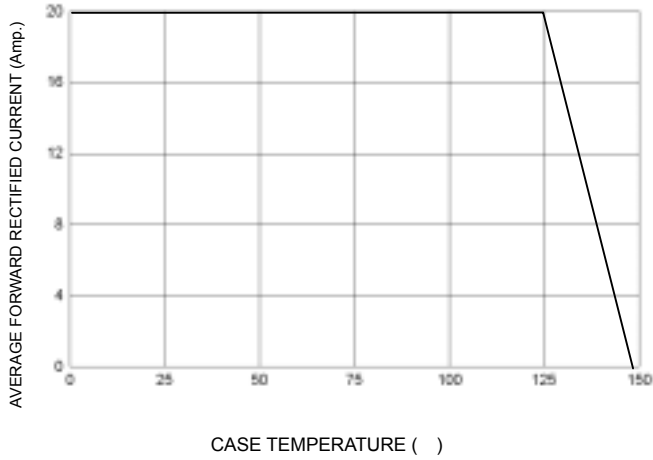


FIG-2 TYPICAL FORWARD CHARACTERISTICS

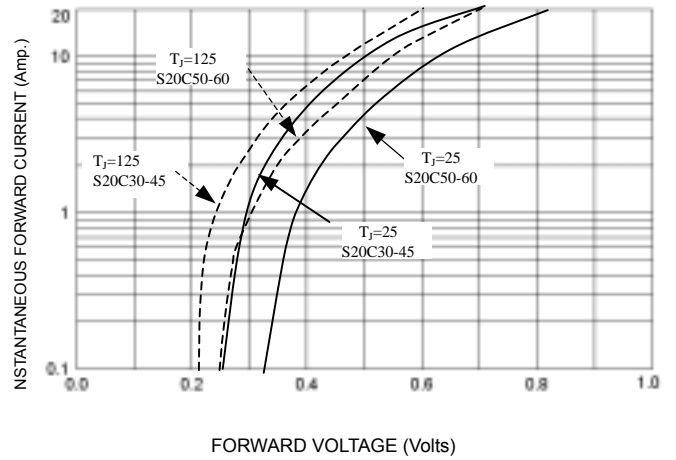


FIG-3 TYPICAL REVERSE CHARACTERISTICS

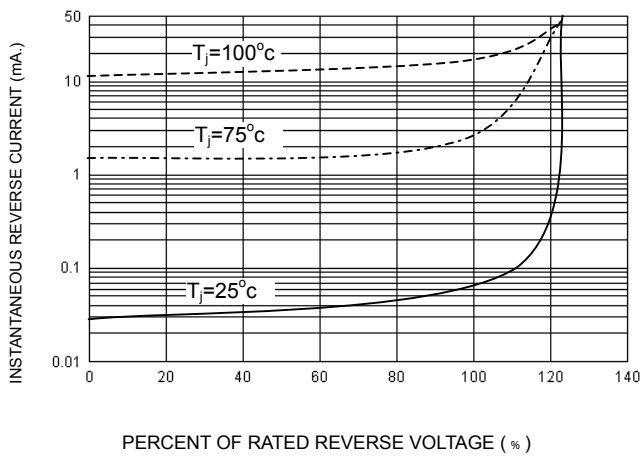


FIG-4 TYPICAL JUNCTION CAPACITANCE

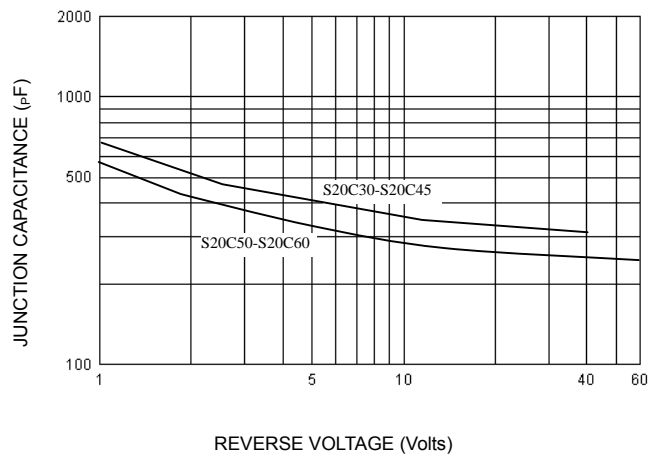


FIG-5 PEAK FORWARD SURGE CURRENT

