

HDP10A20

Schottky Barrier Rectifiers

Using the Schottky Barrier principle with a Refractory metal capable of high temperature operation metal. The proprietary barrier technology allows for reliable operation up to 175 °C junction temperature. Typical application are in switching Mode Power Supplies such as adaptors, DC/DC converters, free-wheeling and polarity protection diodes.

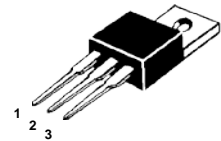
FEATURES

- Low Forward Voltage.
- Low Switching noise.
- High Current Capacity
- Guarantee Reverse Avalanche.
- Guard-Ring for Stress Protection.
- Low Power Loss & High efficiency.
- 175 °C Operating Junction Temperature
- Low Stored Charge Majority Carrier Conduction.
- Plastic Material used Carries Underwriters Laboratory
- Flammability Classification 94V-0
- ESD: 4KV(Min.) Human-Body Model
- *In compliance with EU RoHs 2002/95/EC directives*



200 VOLTS
10 AMPERES

TO-220AB



Common cathode
Suffix "C"

Maximum Ratings

Symbol	Parameter	Value	Units
V_{RRM}	Peak Repetitive Reverse Voltage	200	V
V_{RWM}	Working Peak Reverse Voltage		
V_R	DC Blocking Voltage		
$V_{R(RMS)}$	R.M.S Reverse Voltage	140	V
$I_{F(AV)}$	Average Rectifier Forward Current - Total Device (Rated V_R), $T_C=125^\circ\text{C}$	5.0	A
		10	A
I_{FM}	Peak Repetitive Forward Current (Rate V_R , Square Wave, 20kHz)	10	A
I_{FSM}	Non-Repetitive Peak Surge Current (Surge applied at rate load conditions half wave, single phase, 60Hz)	125	A
T_J, T_{STG}	Operating and Storage Temperature Range	-65 to +175	°C

Electrical Characteristics

Symbol	Parameter	Value	Units
V_F	Maximum Instantaneous Forward Voltage - ($I_F=5.0$ Amp $T_C = 25^\circ\text{C}$) - ($I_F=5.0$ Amp $T_C = 125^\circ\text{C}$)	0.95	V
		0.85	
I_R	Maximum Instantaneous Reverse Current - (Rated DC Voltage, $T_C = 25^\circ\text{C}$) - (Rated DC Voltage, $T_C = 125^\circ\text{C}$)	0.01	mA
		10	

Thermal Resistance Characteristics

Symbol	Parameter	Typ.	Max.	Units
$R_{\theta JC}$	Junction-to-Case	--	4.2	°C/W

Typical Characteristics

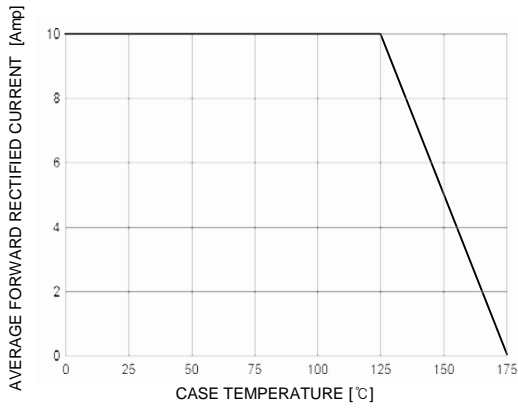


Figure 1. Forward Current Derating Curve

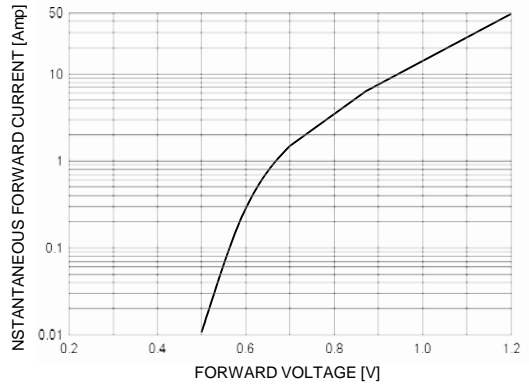


Figure 2. Typical Forward Characteristics

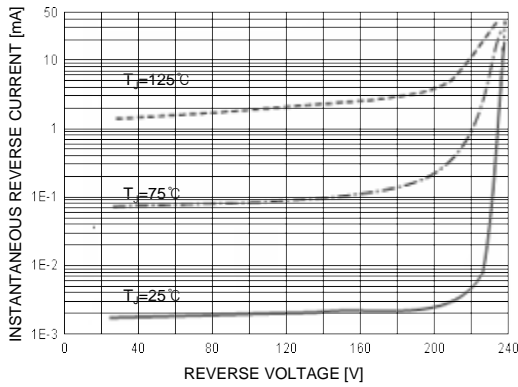


Figure 3. Typical Reverse Characteristics

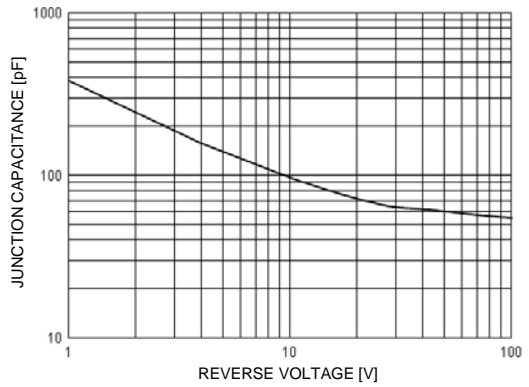


Figure 4. Typical Junction Capacitance

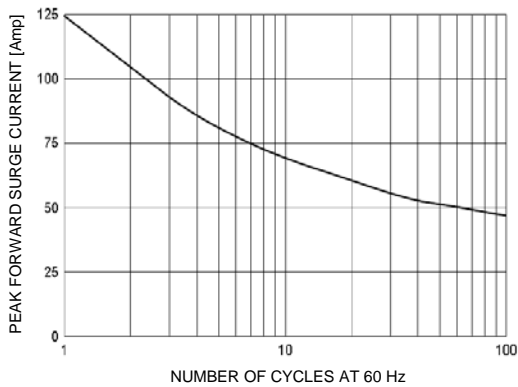
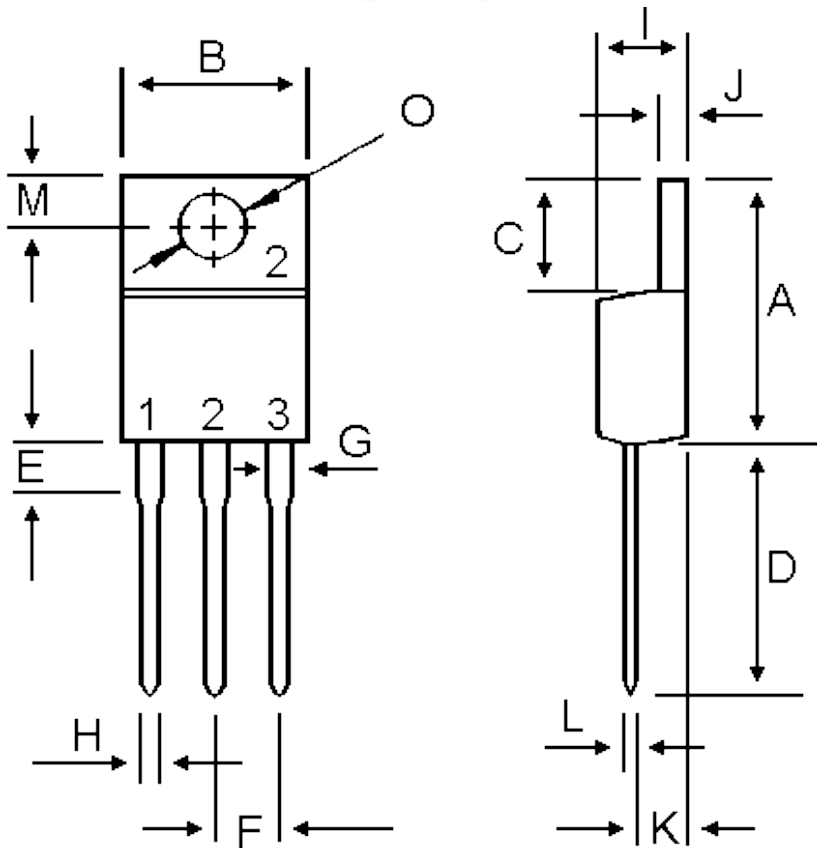


Figure 5. Peak Forward Surge Current

Package Dimension

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