

# HDP10A03x Thru HDP10A06x

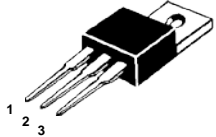
## Schottky Barrier Rectifiers

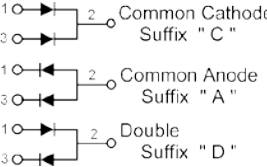
Using the Schottky Barrier principle with a Molybdenum barrier metal. These state-of-the-art geometry features epitaxial construction with oxide passivation and metal overlay contact. Ideally suited for low voltage, high frequency rectification, or as free wheeling and polarity protection diodes.

**30-60 VOLTS**

**10 AMPERES**

**TO-220AB**





1 2 Common Cathode Suffix " C "

1 2 Common Anode Suffix " A "

1 2 Double Suffix " D "



### FEATURES

- 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
- ESD: 8KV(Min.) Human-Body Model
- *In compliance with EU RoHs 2002/95/EC directives*

### Maximum Ratings

Symbol	Parameter	Value						Units
		03	035	04	045	05	06	
$V_{RRM}$	Peak Repetitive Reverse Voltage							V
$V_{RWM}$	Working Peak Reverse Voltage	30	35	40	45	50	60	
$V_R$	DC Blocking Voltage							
$V_{R(RMS)}$	R.M.S Reverse Voltage	21	25	28	32	35	42	V
$I_{F(AV)}$	Average Rectifier Forward Current - Total Device (Rated $V_R$ ), $T_C=125^\circ C$	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 +150						°C

### Electrical Characteristics

Symbol	Parameter	Value						Units
		03	035	04	045	05	06	
$V_F$	Maximum Instantaneous Forward Voltage - ( $I_F=5.0$ Amp $T_C = 25^\circ C$ ) - ( $I_F=5.0$ Amp $T_C = 100^\circ C$ )	0.55			0.65			V
		0.47			0.55			
$I_R$	Maximum Instantaneous Reverse Current - ( Rated DC Voltage, $T_C = 25^\circ C$ ) - ( Rated DC Voltage, $T_C = 125^\circ C$ )	0.5						mA
		20						

### Thermal Resistance Characteristics

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

## Typical Characteristics

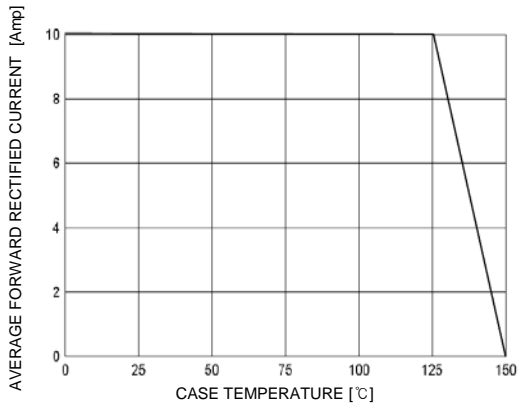


Figure 1. Forward Current Derating Curve

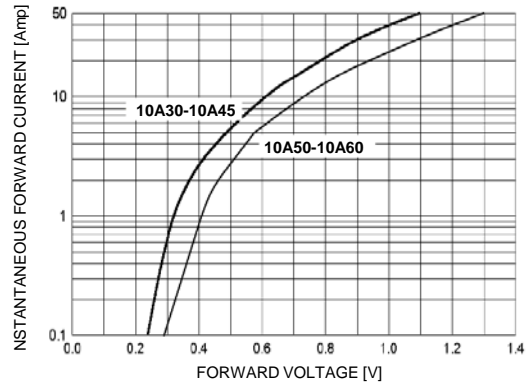


Figure 2. Typical Forward Characteristics

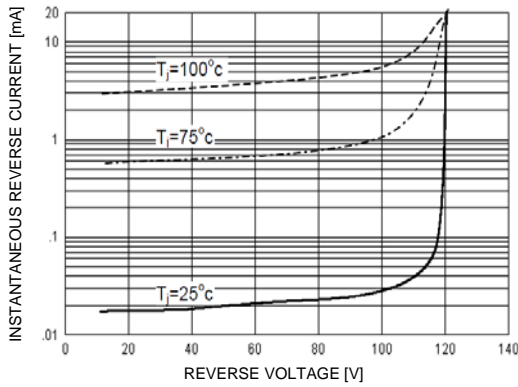


Figure 3. Typical Reverse Characteristics

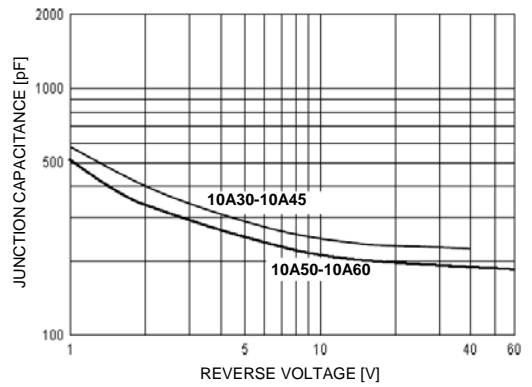


Figure 4. Typical Junction Capacitance

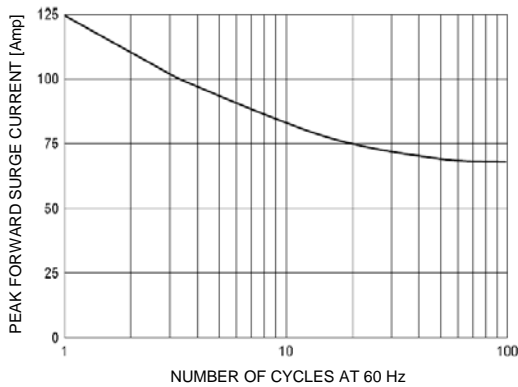
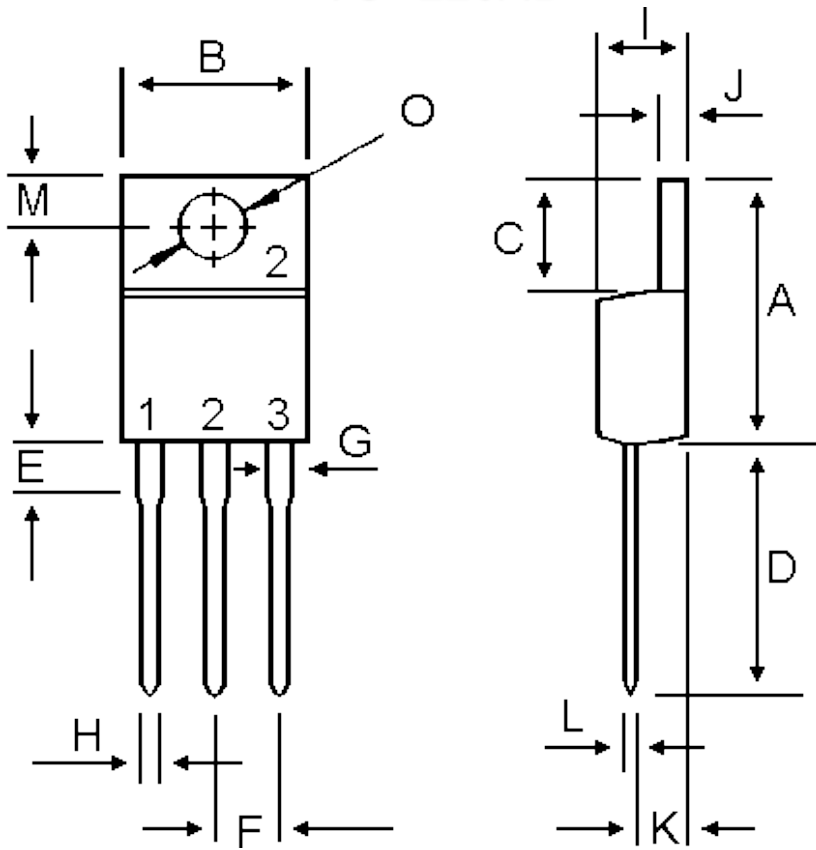


Figure 5. Peak Forward Surge Current

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