JAN 2010

SemiHow
Know-How for Semiconductor

HDS20A03x Thru HDS20A06x

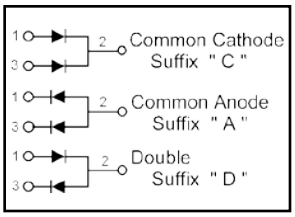
Switchmode Full Plastic Dual Schottky Barrier Power Rectifiers

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

20 AMPERES

ITO-220AB



FEATURES

- Low Forward Voltage.
- Low Switching noise.
- High Current Capacity
- Guarantee Reverse Avalanche.
- Guard-Ring for Stress Protection.
- Low Power Loss & High efficiency.
- 125℃ Operating Junction Temperature
- Low Stored Charge Majority Carrier Conduction.
- Plastic Material used Carries Underwriters Laboratory

Maximum Ratings

Symbol	Parameter	Value						Units
		03	035	04	045	05	06	
V_{RRM}	Peak Repetitive Reverse Voltage	30	35	40	45	50	60	V
V_{RWM}	Working Peak Reverse Voltage							
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	10						A
	- Total Device (Rated V_R), T_C=100℃	20						A
I_{FM}	Peak Repetitive Forward Current (Rate V_R, Square Wave, 20kHz)	20						A
I_{FSM}	Non-Repetitive Peak Surge Current (Surge applied at rate load conditions half ware, single phase, 60Hz)	200						A
T_J, T_{STG}	Operating and Storage Temperature Range	-65 to +125						℃

Electrial Characteristics

Symbol	Parameter	Value						Units
		03	035	04	045	05	06	
V_F	Maximum Instantaneous Forward Voltage							V
	- (IF =10 Amp TC = 25℃)	0.55				0.65		
	- (IF =10 Amp TC = 100℃)	0.48				0.57		
I_R	Maximum Instantaneous Reverse Current							mA
	- (Rated DC Voltage, TC = 25℃)	1.0						
	- (Rated DC Voltage, TC = 125℃)	30						

Typical Characteristics

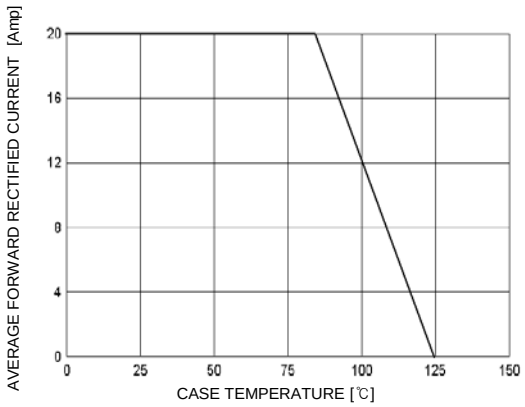


Figure 1. Forward Current Derating Curve

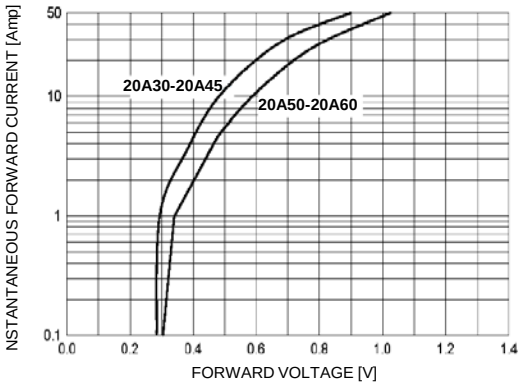


Figure 2. Typical Forward Characterisitics

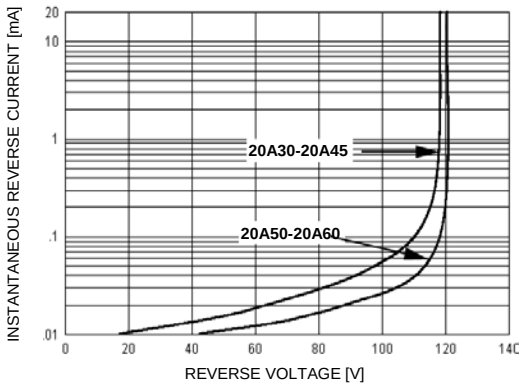


Figure 3. Typical Reverse Characterisitics

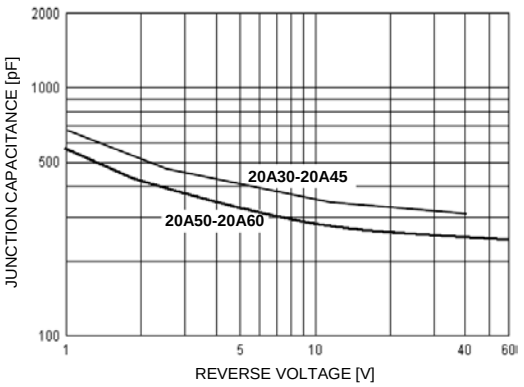


Figure 4. Typical Junction Capacitance

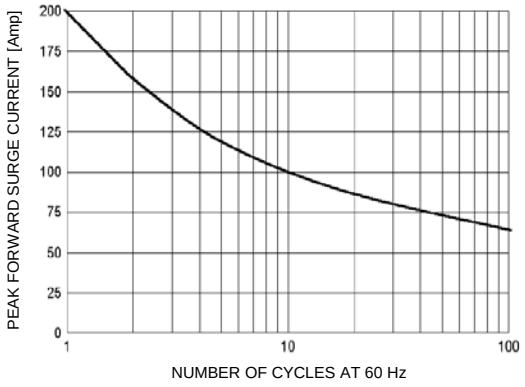
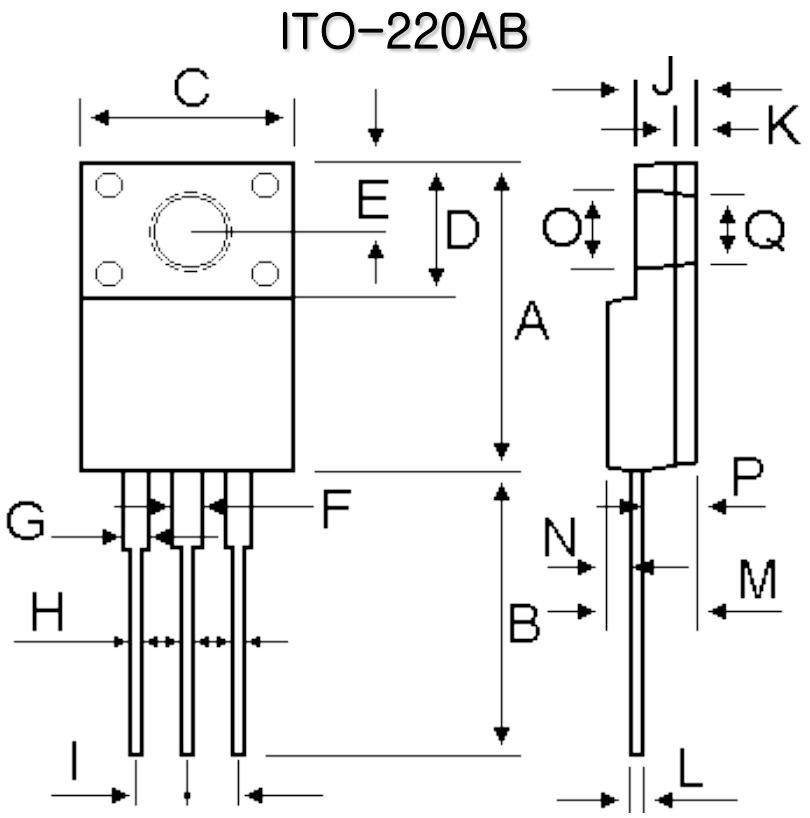


Figure 5. Peak Forward Surge Current

◎ SEMIHOW REV.A0, Nov 2010

Package Dimension



DIM	MILLIMETERS	
	MIN	MAX
A	15.05	15.15
B	13.35	13.45
C	10.00	10.10
D	6.55	6.65
E	2.65	2.75
F	1.55	1.65
G	1.15	1.25
H	0.55	0.65
I	2.50	2.60
J	3.00	3.20
K	1.10	1.20
L	0.55	0.65
M	4.40	4.60
N	1.15	1.25
P	2.65	2.75
O	3.35	3.45
Q	3.15	3.25

◎ SEMIHOW REV.A0,Nov 2010