JAN 2010

SemiHow
Know-How for Semiconductor

HDS10A10

100 VOLTS

10 AMPERES

Switchmode Full Plastic Dual Schottky Barrier Power 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℃ junction temperature. Typical application are in switching Mode Power Supplies such as adaptors, DC/DC converters, free- wheeling and polarity protection diodes.

ITO-220AB





Common cathode
Suffix "C"

FEATURES

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

MECHANICAL DATA

- Case :JEDEC ITO-220AB molded plastic body
- Terminals: Plated lead, solderable per MIL-STD-750, Method 2026
- Polarity: As marked
- Mounting Torque: 5 in-lbs. Max.
- Weight:1.7 g approx.
- ESD: 4KV(Min.) Human-Body Model
- *In compliance with EU RoHs 2002/95/EC directives*

Maximum Ratings

Symbol	Parameter	Value	Units
V_{RRM}	Peak Repetitive Reverse Voltage	100	V
V_{RWM}	Working Peak Reverse Voltage		
V_R	DC Blocking Voltage		
$V_{R(RMS)}$	R.M.S Reverse Voltage	70	V
$I_{F(AV)}$	Average Rectifier Forward Current	5.0	A
	- Total Device (Rated V_R), T_C=125℃	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 ware, single phase, 60Hz)	125	A
T_J, T_{STG}	Operating and Storage Temperature Range	-65 to +175	℃

Electrial Characteristics

Symbol	Parameter	Value	Units
V_F	Maximum Instantaneous Forward Voltage		V
	- (IF =5.0 Amp TC = 25℃)	0.85	
	- (IF =5.0 Amp TC = 125℃)	0.78	
I_R	Maximum Instantaneous Reverse Current		mA
	- (Rated DC Voltage, TC = 25℃)	0.01	
	- (Rated DC Voltage, TC = 125℃)	10	

Thermal Resistance Characteristics

Symbol	Parameter	Typ.	Max.	Units
$R_{\theta JC}$	Junction-to-Case	--	3.8	℃/W

Typical Characteristics

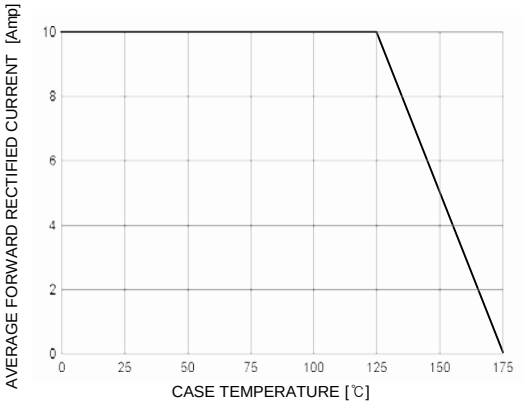


Figure 1. Forward Current Derating Curve

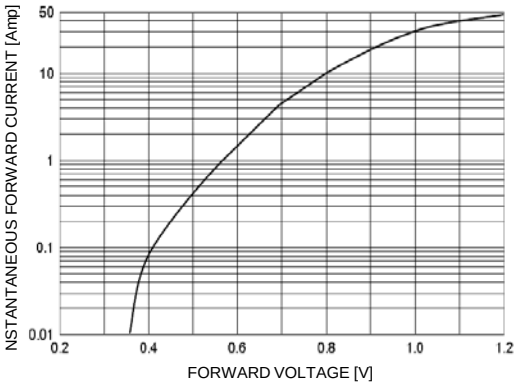


Figure 2. Typical Forward Characterisitics

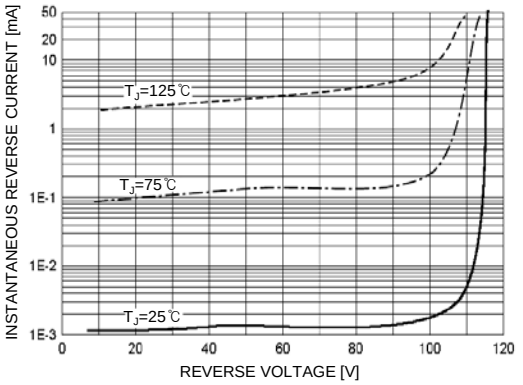


Figure 3. Typical Reverse Characterisitics

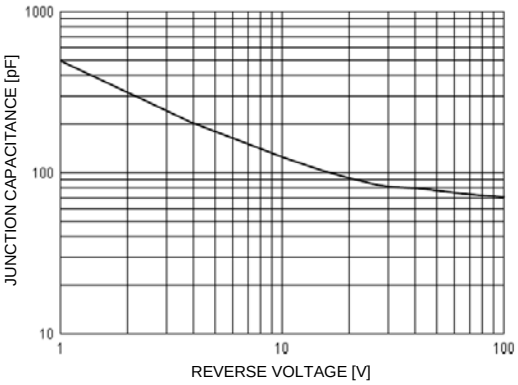


Figure 4. Typical Junction Capacitance

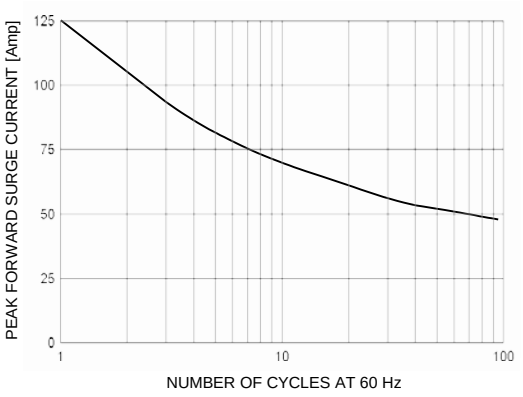
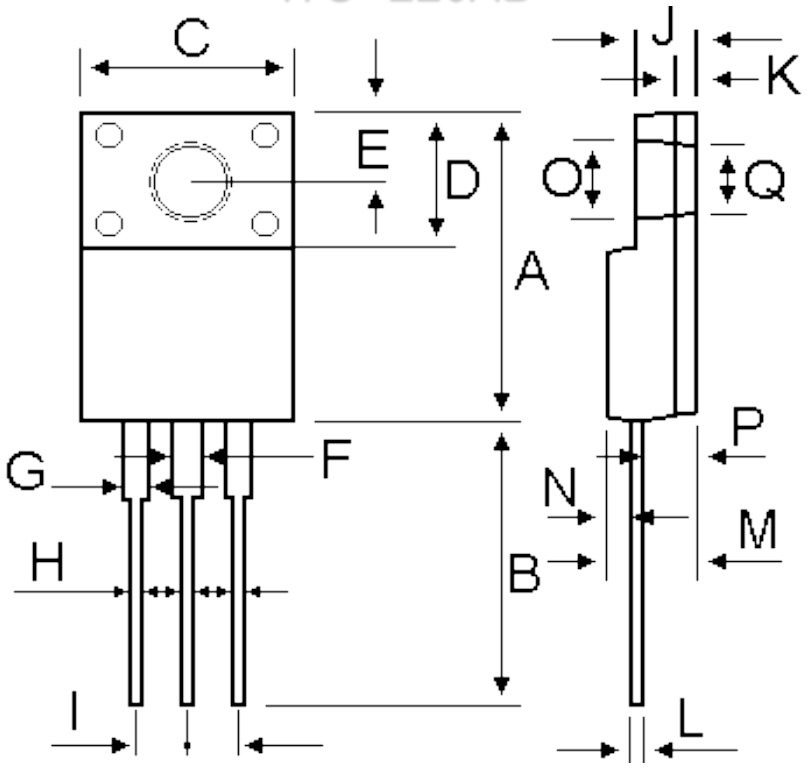


Figure 5. Peak Forward Surge Current

◎ SEMIHOW REV.A0, Nov 2010

Package Dimension

ITO-220AB



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