

Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitance load, derate current by 20%.

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	40	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_{RM}		
Average Rectified Output Current @ $T_C = 110^\circ\text{C}$	I_O	30	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	250	A
Peak Repetitive Reverse Surge Current (2uS-1Khz)	I_{RRM}	3	A
Isolation Voltage (ITO-220AB Only) From terminal to heatsink $t = 3$ sec.	V_{AC}	2000	V

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance (per leg) Package = TO-220AB Package = ITO-220AB	$R_{\theta JC}$	2 4	$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150	$^\circ\text{C}$

Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage Drop	V_F	-	- 0.42	0.50 0.45	V	$I_F = 15\text{A}, T_J = 25^\circ\text{C}$ $I_F = 15\text{A}, T_J = 125^\circ\text{C}$
Leakage Current (Note 4)	I_R	-	-	0.5 100	mA	$V_R = 40\text{V}, T_J = 25^\circ\text{C}$ $V_R = 40\text{V}, T_J = 125^\circ\text{C}$

Notes: 4. Short duration pulse test used to minimize self-heating effect.

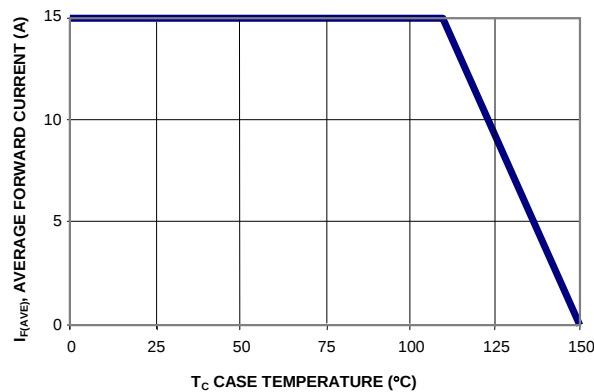


Figure 1: Current Derating Curve, Per Element

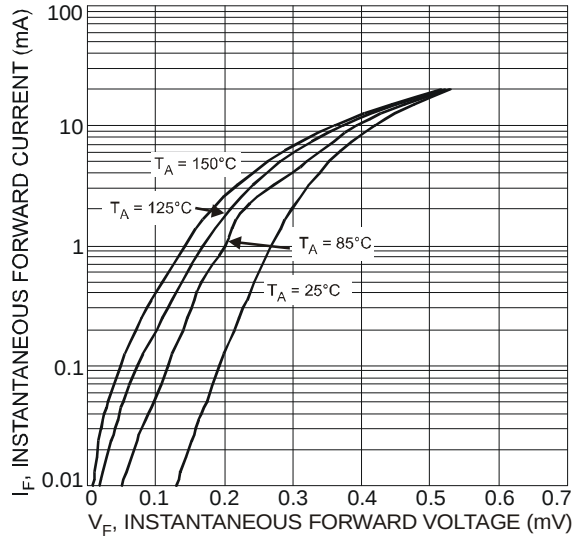


Fig. 2 Typical Forward Characteristics

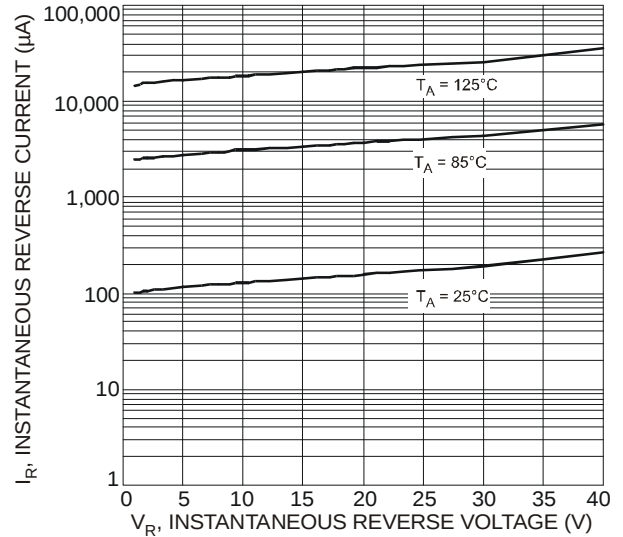
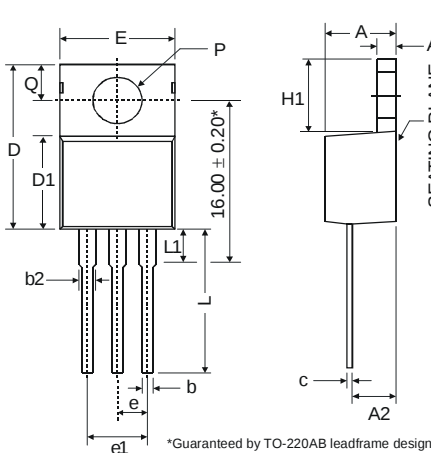


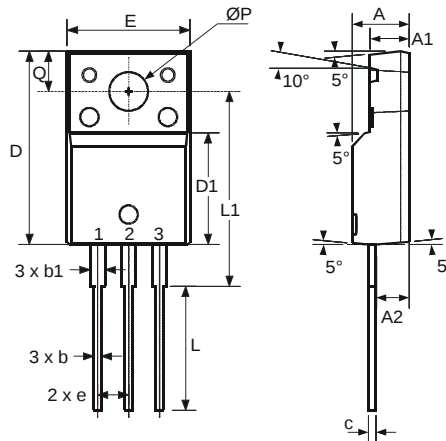
Fig. 3 Typical Reverse Characteristics

Package Outline Dimensions



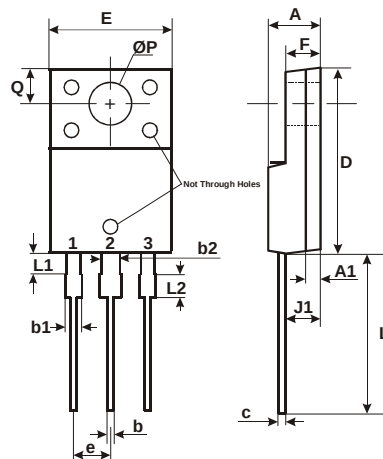
TO-220AB			
Dim	Min	Typ	Max
A	3.56	-	4.82
A1	0.51	-	1.39
A2	2.04	-	2.92
b	0.39	0.81	1.01
b2	1.15	1.24	1.77
c	0.356	-	0.61
D	14.22	-	16.51
D1	8.39	-	9.01
e	2.54		
e1	5.08		
E	9.66	-	10.66
H1	5.85	-	6.85
L	12.70	-	14.73
L1	-	-	6.35
P	3.54	-	4.08
Q	2.54	-	3.42

All Dimensions in mm



ITO-220AB (Note 5)			
Dim	Min	Typ	Max
A	4.50	4.70	4.90
A1	3.04	3.24	3.44
A2	2.56	2.76	2.96
b	0.50	0.60	0.75
b1	1.10	1.20	1.35
c	0.50	0.60	0.70
D	15.67	15.87	16.07
D1	8.99	9.19	9.39
e	2.54		
E	9.91	10.11	10.31
L	9.45	9.75	10.05
L1	15.80	16.00	16.20
P	2.98	3.18	3.38
Q	3.10	3.30	3.50

All Dimensions in mm



ITO-220AB ALTERNATE (Note 5)		
DIM.	MIN.	MAX.
A	4.30	4.70
A1	1.3	
b	0.50	0.75
b1	1.10	1.35
b2	1.50	1.75
c	0.50	0.75
D	14.80	15.20
E	9.96	10.36
e	2.54 typ	
F	2.80	3.20
J1	2.50	2.90
L	12.80	13.60
L1	1.70	1.90
L2	1.90	2.10
ØP	3.50 typ	
Q	2.70 typ	

All Dimensions in mm

Notes: 5. For product manufactured with Date Code 0733 (week 33, 2007) and newer, please refer to ITO-220AB dimensions. For product manufactured prior to Date Code 0733, please refer to ITO-220AB ALTERNATE dimensions.

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