

Maximum Ratings (Per Leg) (@T_A = 25°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}	200	V
Working Peak Reverse Voltage	V _{RWM}		
DC Blocking Voltage	V _{RM}		
Maximum Voltage Rate of Change (Rated V _R)	dv/dt	10,000	V/μs
Average Rectified Output Current (Per Leg)	I _O	10	A
(Total)		20	
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	180	A
Peak Repetitive Reverse Surge Current (2μs-1KHz)	I _{RRM}	3	A
Isolation Voltage (ITO-220AB Only) From terminal to heatsink t = 3 sec.	V _{AC}	2000	V

Thermal Characteristics (Per Leg)

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance Package = TO-220AB Package = ITO-220AB	R _{θJC}	2	°C/W
		4	
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +175	°C

Electrical Characteristics (Per Leg) @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage Drop	V _F	-	- 0.66 -	0.86 0.72 0.96	V	I _F = 10A, T _J = 25°C I _F = 10A, T _J = 125°C I _F = 20A, T _J = 25°C
Leakage Current (Note 6)	I _R	-	-	0.1 10	mA	V _R = 200V, T _J = 25°C V _R = 200V, T _J = 125°C
Reverse Recovery Time	t _{rr}	-	24 20	30 25	ns	I _F = 0.5A, I _R = 1A, I _{RR} = 0.25A I _F = 1A, V _R = 30V, di/dt = 100A/μs, T _J = 25°C

Notes: 6. Short duration pulse test used to minimize self-heating effect.

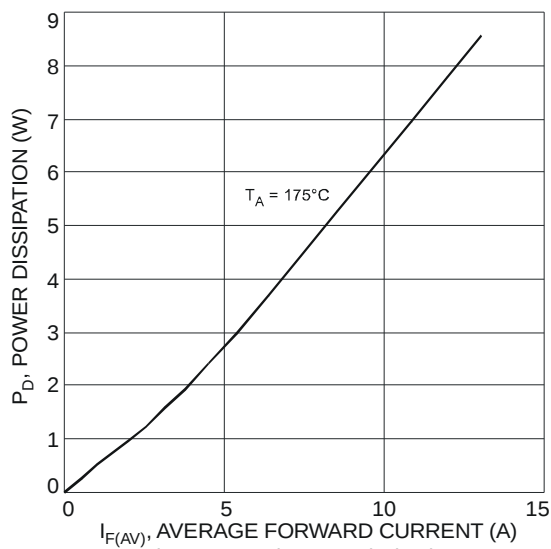


Fig. 1 Forward Power Dissipation

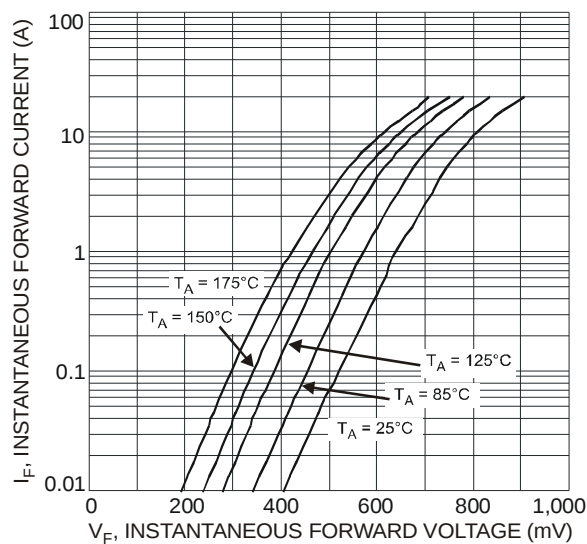


Fig. 2 Typical Forward Characteristics

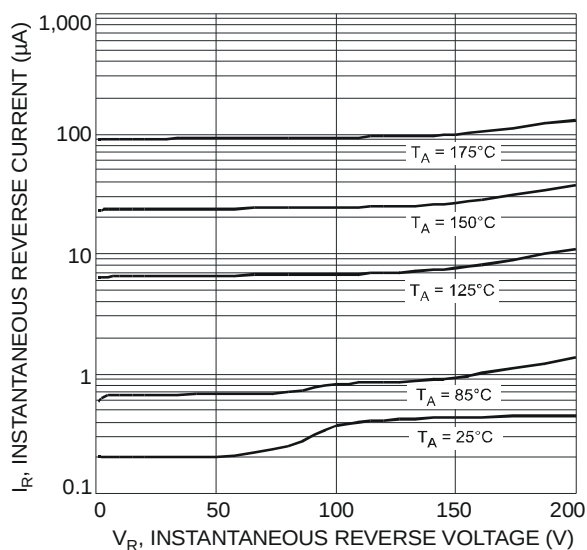


Fig. 3 Typical Reverse Characteristics

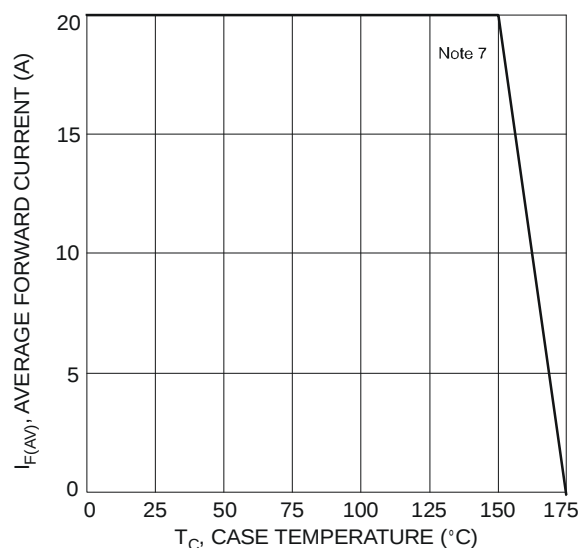


Fig. 4 Forward Current Derating Curve

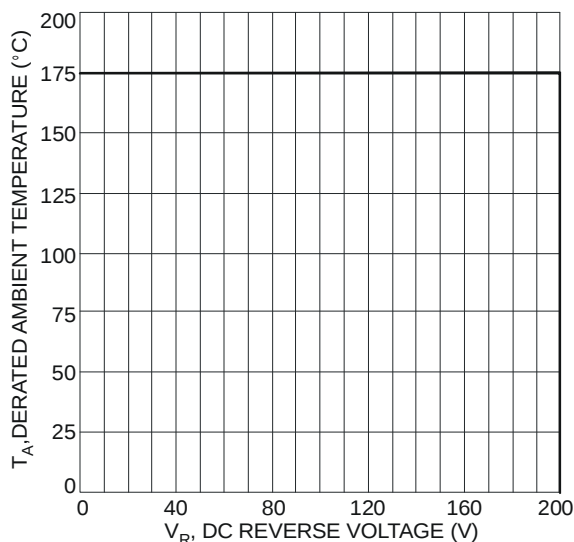


Fig. 5 Operating Temperature Derating

Notes: 7. Using heatsink (by black Aluminum 45mm * 20mm * 12mm)

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SBR20A200

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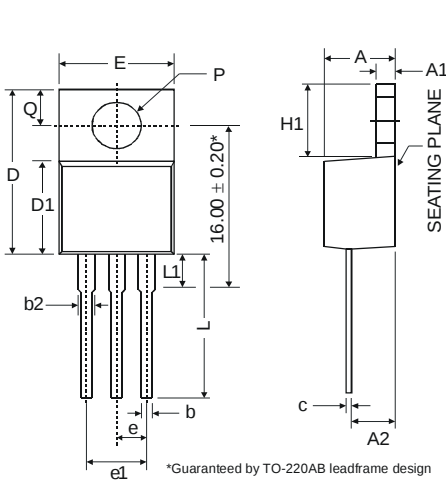
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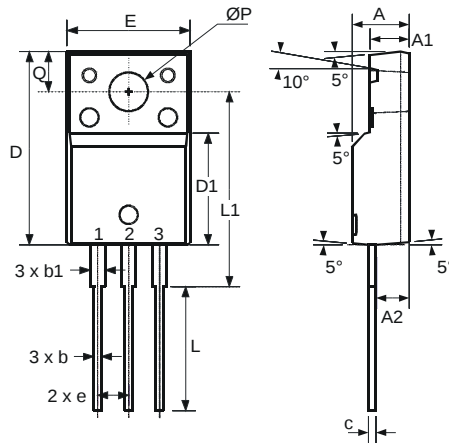
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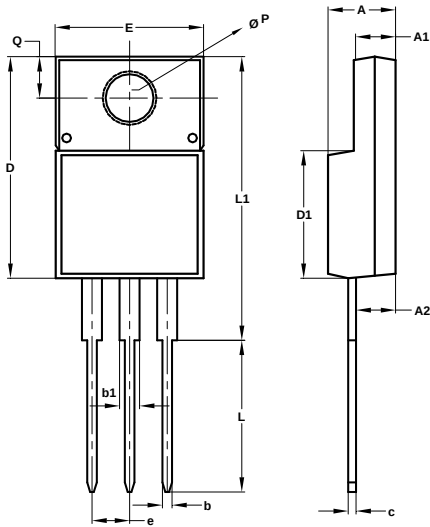
Package Outline Dimensions



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			
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			



ITO220AB (Alternate)		
Dim	Min	Max
A	4.36	4.77
A1	2.54	3.10
A2	2.54	2.80
b	0.55	0.75
b1	1.20	1.50
c	0.38	0.68
D	14.50	15.50
D1	8.38	8.89
e	2.41	2.67
E	9.72	10.27
L	9.87	10.67
L1	15.8	17.00
P	3.08	3.39
Q	2.60	3.00
All Dimensions in mm		

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