

Maximum Ratings (Per Leg) @ $T_A = 25^\circ\text{C}$ 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}	100	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_{RM}		
Average Rectified Output Current per Device	(Per Leg)	7.5	A
	(Total)	15	
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	100	A

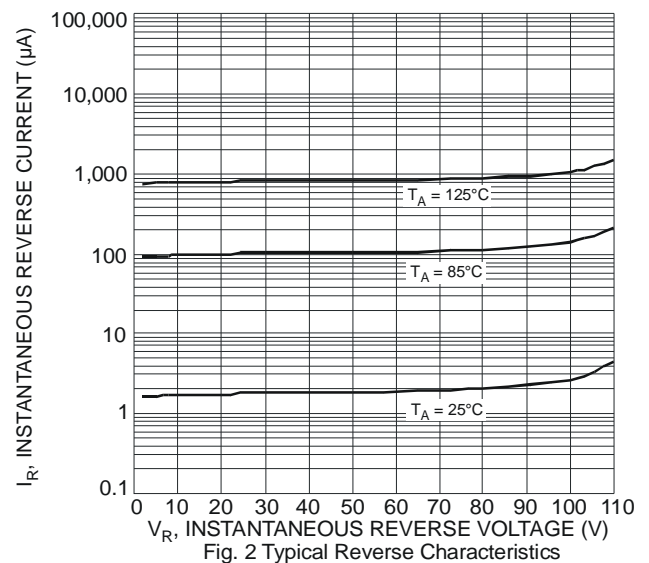
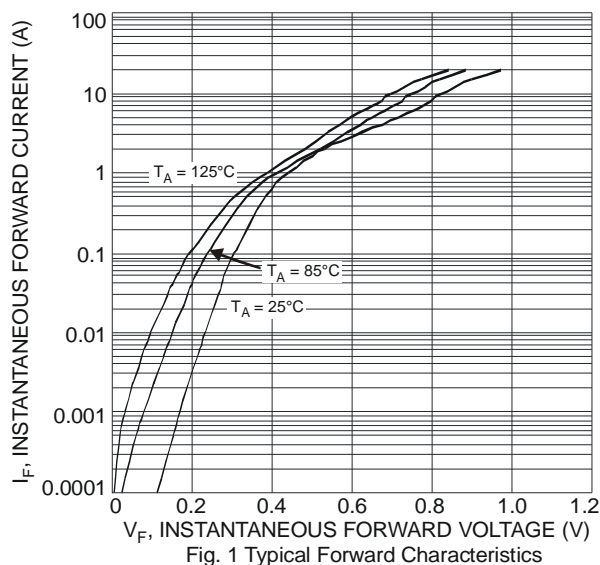
Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance	$R_{\theta JC}$	2	$^\circ\text{C/W}$
		1.5	
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +175	$^\circ\text{C}$

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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage Drop	V_F	-	-	0.80	V	$I_F = 7.5\text{A}, T_J = 25^\circ\text{C}$
		-	0.67	0.71		$I_F = 7.5\text{A}, T_J = 125^\circ\text{C}$
Leakage Current (Note 3)	I_R	-	-	80	μA	$V_R = 100\text{V}, T_J = 25^\circ\text{C}$
		-	1.1	10	mA	$V_R = 100\text{V}, T_J = 125^\circ\text{C}$
		-	3.2	-		$V_R = 100\text{V}, T_J = 150^\circ\text{C}$

Notes: 3. Short duration pulse test used to minimize self-heating effect.



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SBR15U100CTL

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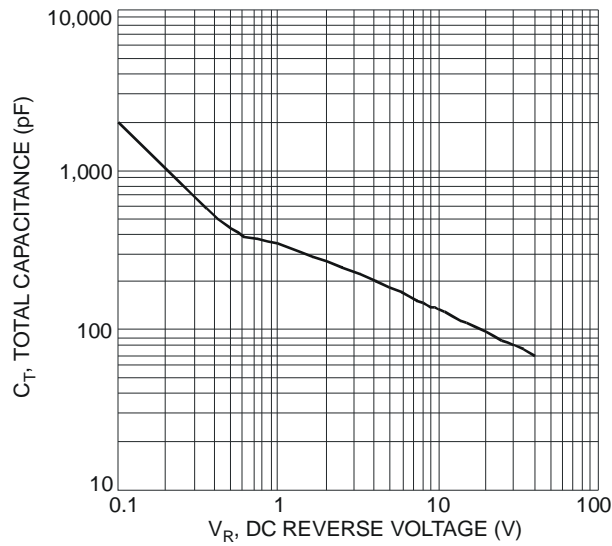


Fig. 3 Total Capacitance vs. Reverse Voltage

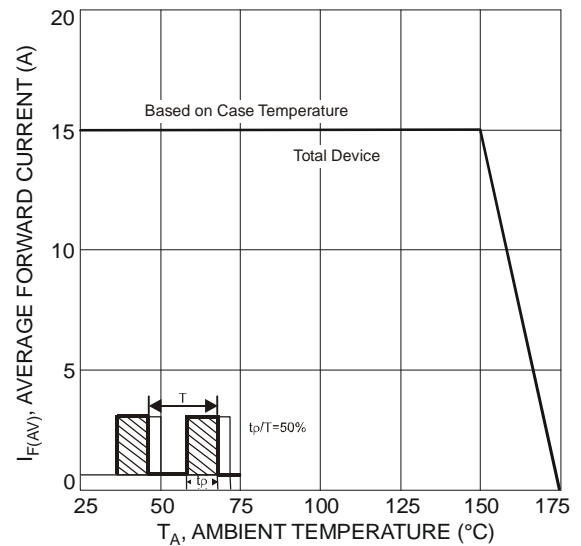


Fig. 4 Forward Current Derating Curve

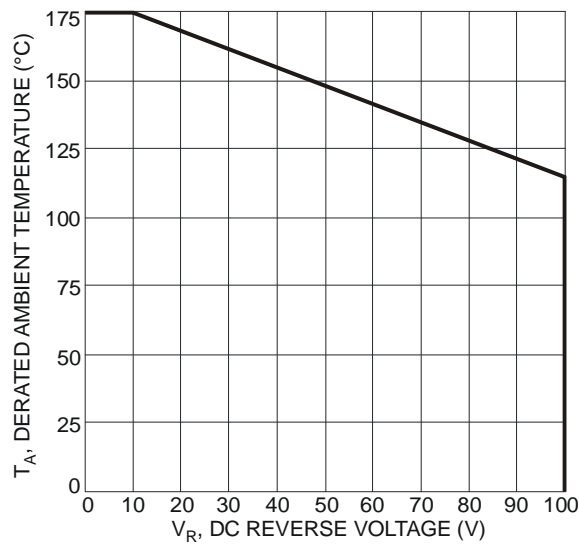
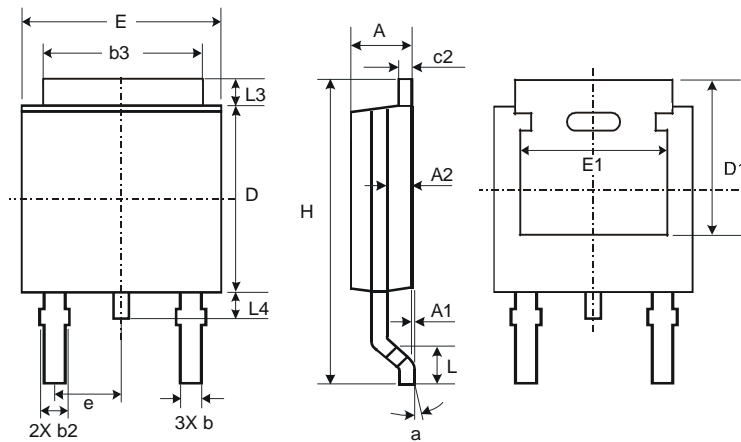


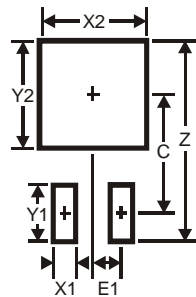
Fig. 5 Operating Temperature Derating

Package Outline Dimensions



TO252			
Dim	Min	Max	Typ
A	2.19	2.39	2.29
A1	0.00	0.13	0.08
A2	0.97	1.17	1.07
b	0.64	0.88	0.783
b2	0.76	1.14	0.95
b3	5.21	5.46	5.33
c2	0.45	0.58	0.531
D	6.00	6.20	6.10
D1	5.21	—	—
e	—	—	2.286
E	6.45	6.70	6.58
E1	4.32	—	—
H	9.40	10.41	9.91
L	1.40	1.78	1.59
L3	0.88	1.27	1.08
L4	0.64	1.02	0.83
a	0°	10°	—
All Dimensions in mm			

Suggested Pad Layout



Dimensions	Value (in mm)
Z	11.6
X1	1.5
X2	7.0
Y1	2.5
Y2	7.0
C	6.9
E1	2.3

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