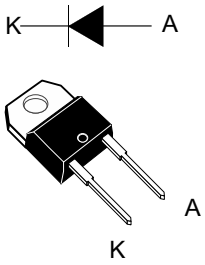
Features

- High Speed Switching, t_{rr} < 28ns at rating current
- High Reverse Voltage and High Reliability
- Max Forward Voltage, V_F < 2.0V @25^oC
- Insulated voltage, 2500V DC

Applications

- Boost diode in continuous mode power factor corrections



T0-220AC ins

Absolute Maximum Ratings T_C = 25^oC unless otherwise noted

Symbol	Parameter	Ratings	Units
V_{RRM}	Peak Repetitive Reverse Voltage	600	V
V_{RWM}	Working Peak Reverse Voltage	600	V
V_R	DC Blocking Voltage	600	V
$I_{F(AV)}$	Average Rectified Forward Current @ T_C = 115^oC	10	A
I_{FSM}	Non-repetitive Peak Surge Current 60Hz Single Half-Sine Wave	90	A
T_J, T_{STG}	Operating and Storage Temperature Range	-65 to +150	^oC

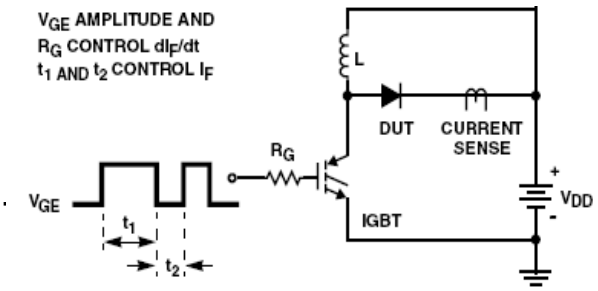
Thermal Characteristics

Symbol	Parameter	Ratings	Units
$R_{\theta JC}$	Maximum Thermal Resistance, Junction to Case	2.0	$^oC/W$

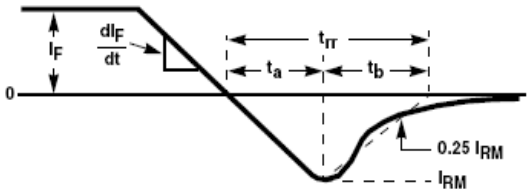
Electrical Characteristics $T_C = 25^oC$ unless otherwise noted

Symbol	Parameter		Min.	Typ.	Max.	Units
$V_{FM}1$	I_F = 10A I_F = 10A	$T_C = 25^oC$ $T_C = 125^oC$	- -	1.8 1.5		V
$I_{RM}1$	V_R = 600V V_R = 600V	$T_C = 25^oC$ $T_C = 125^oC$	- -	- -	10 100	μA
t_{rr}	I_F = 10A, di/dt = 200A/μs, V_R = 390V	$T_C = 25^oC$ $T_C = 125^oC$	- -	28 25		ns
W_{AVL}	Avalanche Energy (L = 40mH)		20	-	-	mJ

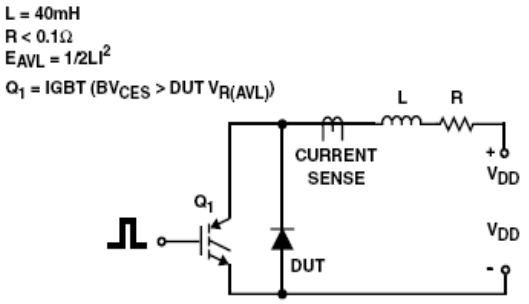
Notes:
1: Pulse: Test Pulse width = 300μs, Duty Cycle = 2%



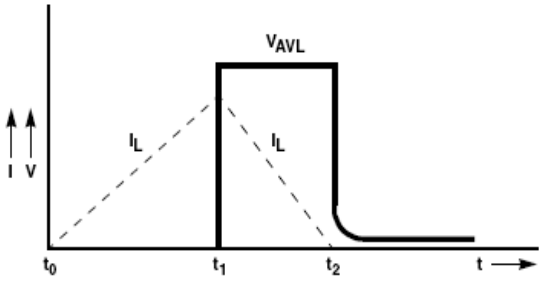
t_{rr} TEST CIRCUIT



t_{rr} WAVEFORMS AND DEFINITIONS



AVALANCHE ENERGY TEST CIRCUIT



AVALANCHE CURRENT AND VOLTAGE WAVEFORMS

Typical Performance Characteristics

Figure 1. Typical Forward Voltage Drop vs. Forward Current

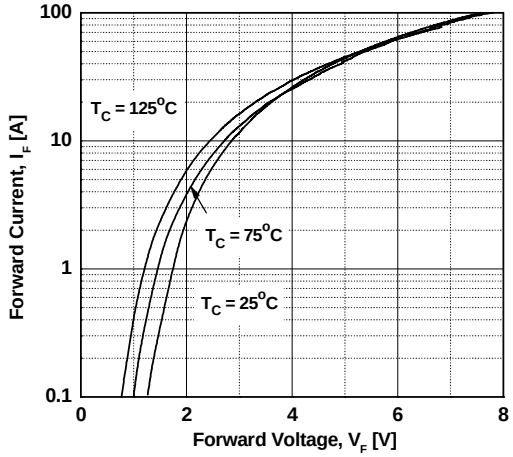


Figure 2. Typical Reverse Current vs. Reverse Voltage

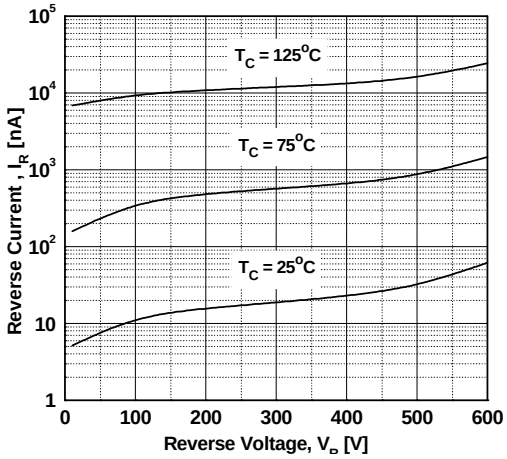


Figure 3.Typical Junction Capacitance

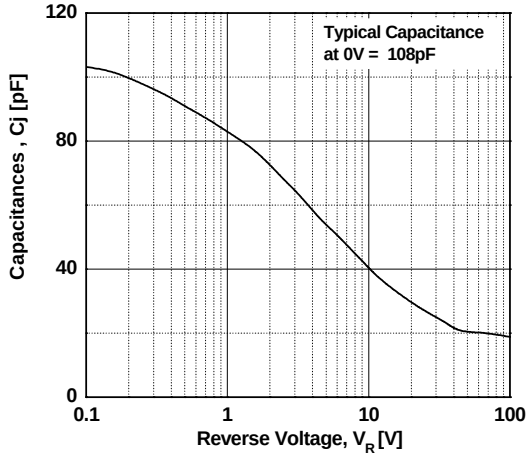


Figure 4. Typical Reverse Recovery Time vs. di/dt

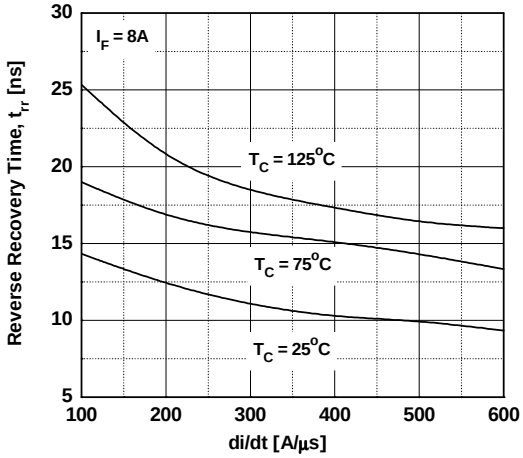


Figure 5. Typical Reverse Recovery Current vs. di/dt

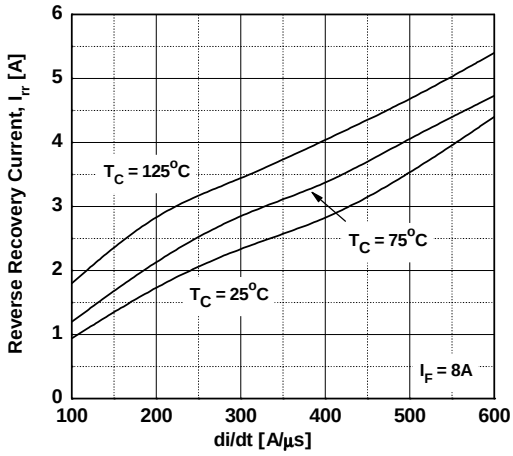
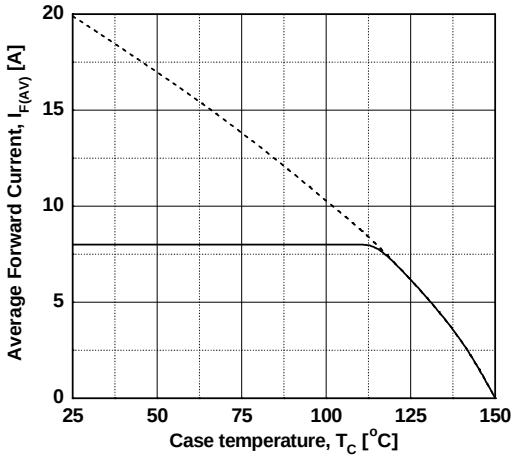
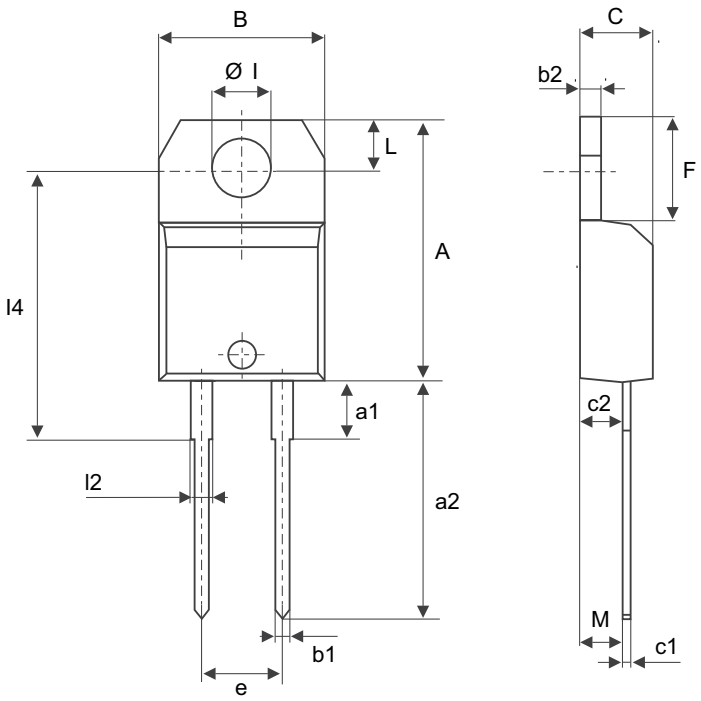


Figure 6. Forward Current Derating Curve



T0-220AC ins. package outline



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	15.20		15.90	0.598		0.625
a1		3.75			0.147	
a2	13.00		14.00	0.511		0.551
B	10.00		10.40	0.393		0.409
b1	0.61		0.88	0.024		0.034
b2	1.23		1.32	0.048		0.051
C	4.40		4.60	0.173		0.181
c1	0.49		0.70	0.019		0.027
c2	2.40		2.72	0.094		0.107
e	4.80		5.40	0.189		0.212
F	6.20		6.60	0.244		0.259
ØI	3.75		3.85	0.147		0.151
l4	15.80	16.40	16.80	0.622	0.646	0.661
L	2.65		2.95	0.104		0.116
l2	1.14		1.70	0.044		0.066
M		2.60			0.102	