DYNAMIC CHARACTERISTICS

APT100DL60B_S(G)

Symbol	Characteristic / Test Conditions		Min	Typ	Max	Unit
t_{rr}	Reverse Recovery Time	I_F = 1A, di_F/dt = -100A/µs, V_R = 30V, T_J = 25°C		45		ns
t_{rr}	Reverse Recovery Time	I_F = 100A, di_F/dt = -200A/µs V_R = 400V, T_C = 25°C		487		ns
Q_{rr}	Reverse Recovery Charge			2328		nC
I_{RRM}	Maximum Reverse Recovery Current			11		Amps
t_{rr}	Reverse Recovery Time	I_F = 100A, di_F/dt = -200A/µs V_R = 400V, T_C = 125°C		716		ns
Q_{rr}	Reverse Recovery Charge			5954		nC
I_{RRM}	Maximum Reverse Recovery Current			18		Amps
t_{rr}	Reverse Recovery Time	I_F = 100A, di_F/dt = -1000A/µs V_R = 400V, T_C = 125°C		333		ns
Q_{rr}	Reverse Recovery Charge			10002		nC
I_{RRM}	Maximum Reverse Recovery Current			49		Amps

THERMAL AND MECHANICAL CHARACTERISTICS

Symbol	Characteristic / Test Conditions	Min	Typ	Max	Unit
$R_{\theta JC}$	Junction-to-Case Thermal Resistance			0.34	°C/W
W_T	Package Weight		0.22		oz
			5.9		g
Torque	Maximum Mounting Torque			10	lb·in
				1.1	N·m

① Continuous current limited by package lead temperature.

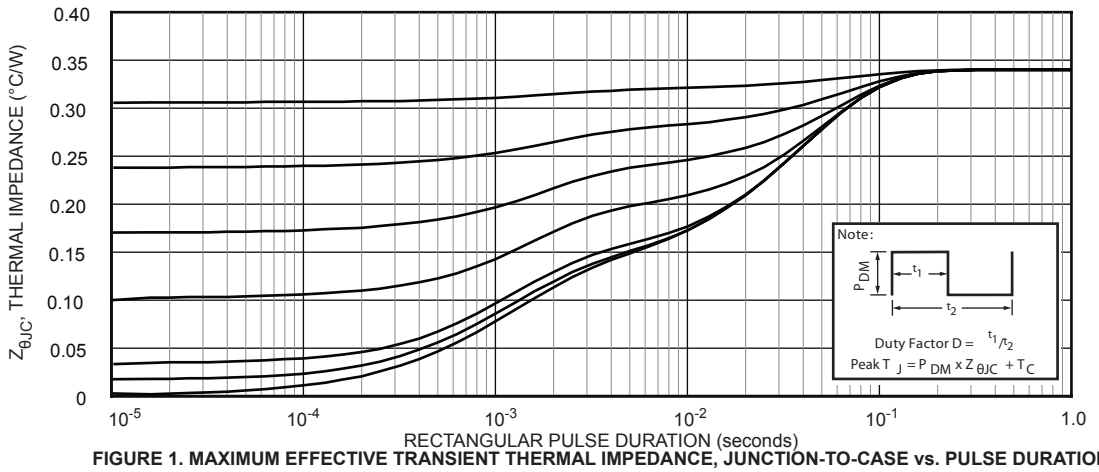


FIGURE 1. MAXIMUM EFFECTIVE TRANSIENT THERMAL IMPEDANCE, JUNCTION-TO-CASE vs. PULSE DURATION

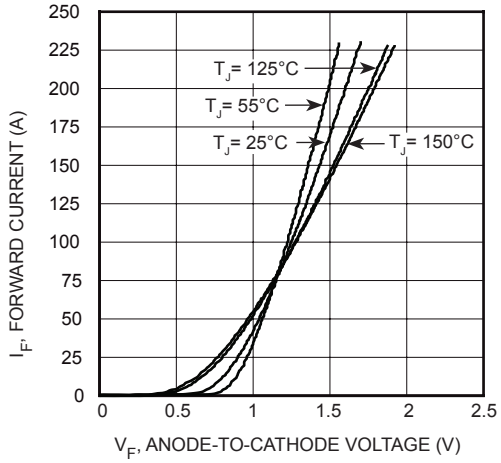


FIGURE 2, Forward Current vs. Forward Voltage

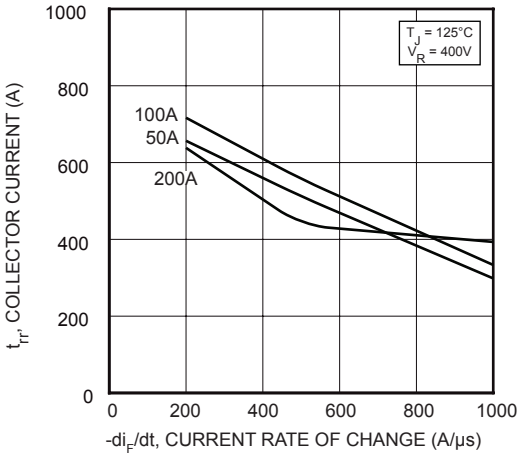


FIGURE 3, Reverse Recovery Time vs. Current Rate of Change

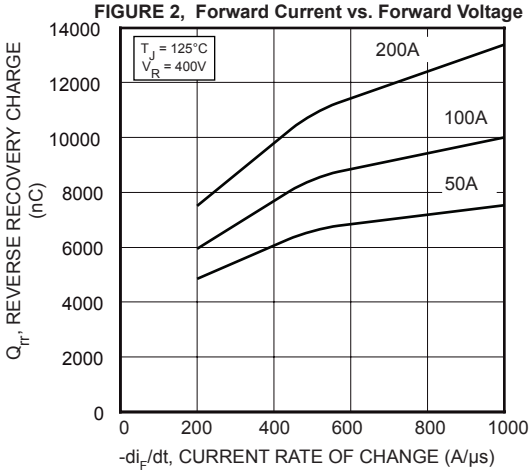


FIGURE 4, Reverse Recovery Charge vs. Current Rate of Change

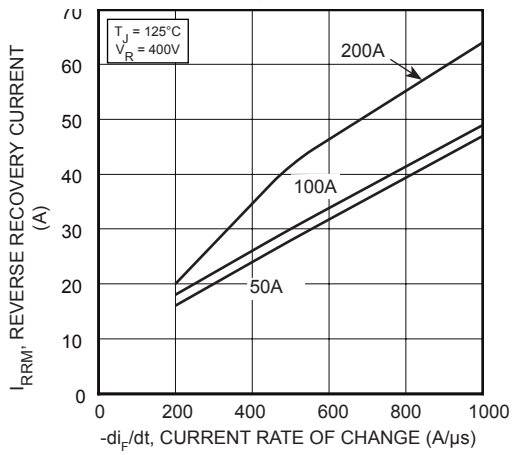


FIGURE 5, Reverse Recovery Current vs. Current Rate of Change

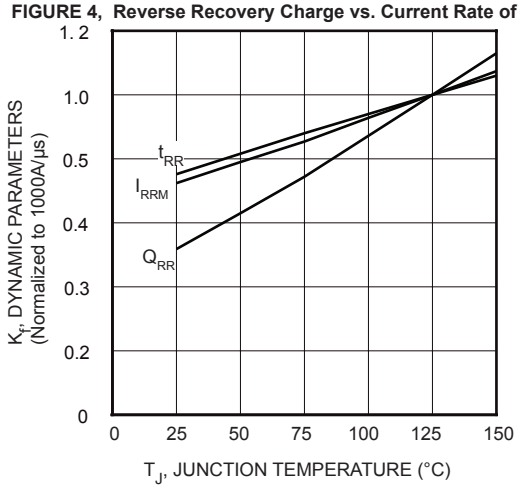


FIGURE 6, Dynamic Parameters vs Junction Temperature

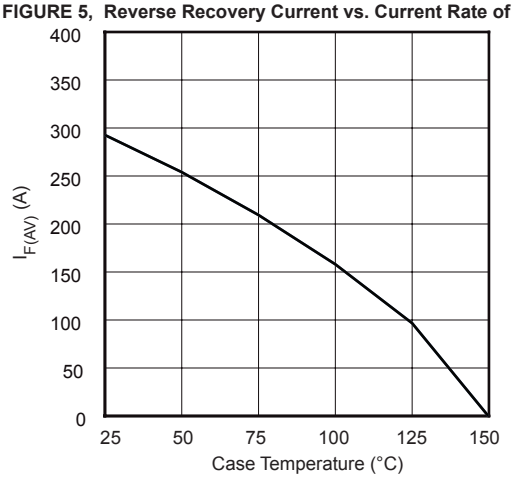


FIGURE 7, Maximum Average Forward Current vs. Case Temperature

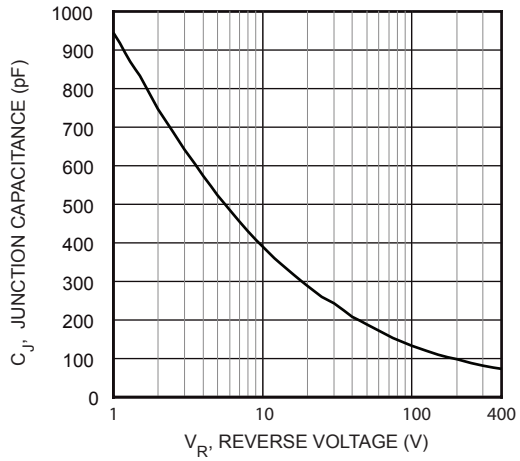


FIGURE 8, Junction Capacitance vs. Reverse Voltage

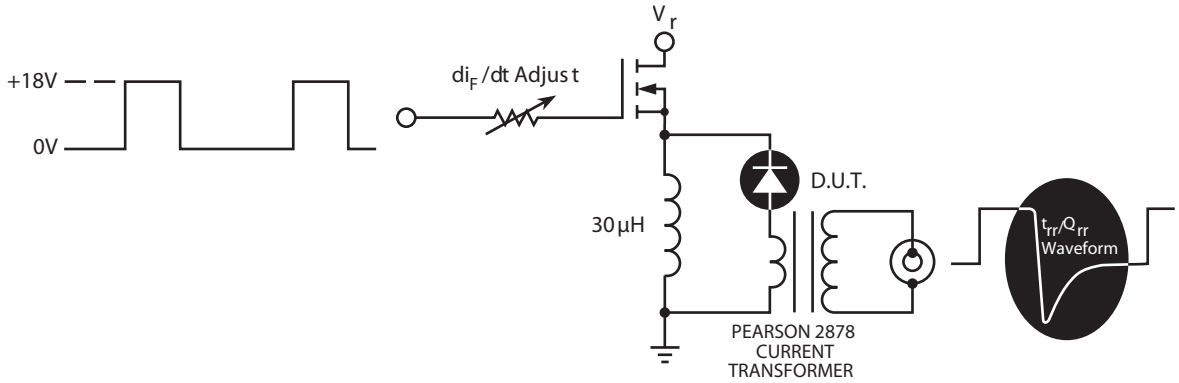


Figure 9. Diode Test Circuit

1. I_F - Forward Conduction Current
2. di_F/dt - Rate of Diode Current Change Through Zero Crossing.
3. I_{RRM} - Maximum Reverse Recovery Current
4. t_{rr} - Reverse Recovery Time measured from zero crossing where diode current goes from positive to negative, to the point at which the straight line through I_{RRM} and 0.25, I_{RRM} passes through zero.
5. Q_{rr} - Area Under the Curve Defined by I_{RRM} and t_{RR}.

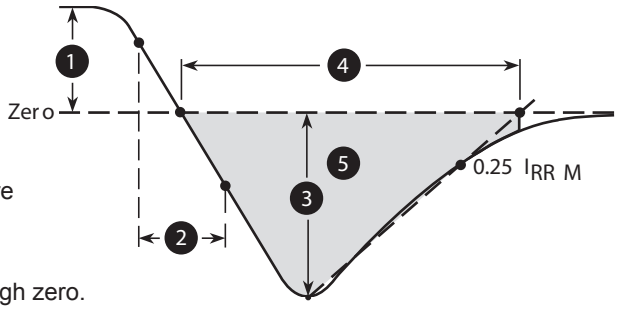
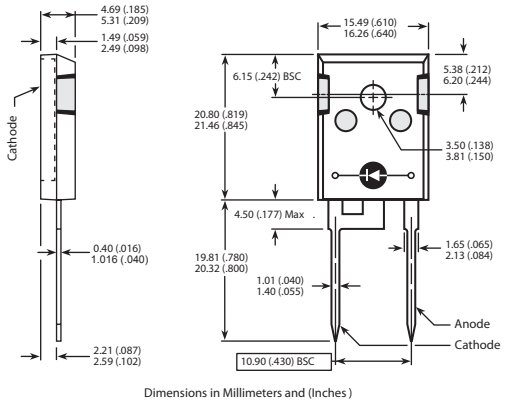


Figure 10. Diode Reverse Recovery Waveform Definition

TO-247 Package Outline

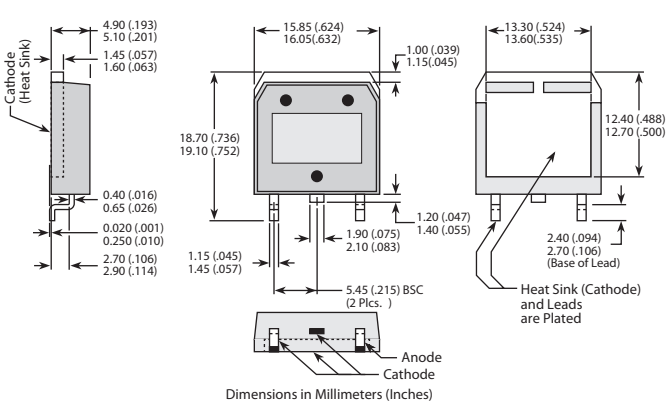
e1 SAC: Tin, Silver, Copper



Dimensions in Millimeters and (Inches)

D³PAK Package Outline

e3 100% Sn



Dimensions in Millimeters (Inches)

052-6318 Rev C 1 - 2014