

DYNAMIC CHARACTERISTICS

APT100DL60B_S(G)

Symbol	Characteristic / Test Conditions	Min	Typ	Max	Unit
t_{rr}	Reverse Recovery Time $I_F = 1A, di_F/dt = -100A/\mu s, V_R = 30V, T_J = 25^\circ C$		45		ns
t_{rr}	Reverse Recovery Time		487		
Q_{rr}	Reverse Recovery Charge		2328		nC
I_{RRM}	Maximum Reverse Recovery Current		11		
t_{rr}	Reverse Recovery Time		716		ns
Q_{rr}	Reverse Recovery Charge		5954		
I_{RRM}	Maximum Reverse Recovery Current		18		Amps
t_{rr}	Reverse Recovery Time		333		
Q_{rr}	Reverse Recovery Charge		10002		nC
I_{RRM}	Maximum Reverse Recovery Current		49		

THERMAL AND MECHANICAL CHARACTERISTICS

Symbol	Characteristic / Test Conditions	Min	Typ	Max	Unit
$R_{\theta JC}$	Junction-to-Case Thermal Resistance			0.34	$^\circ C/W$
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.

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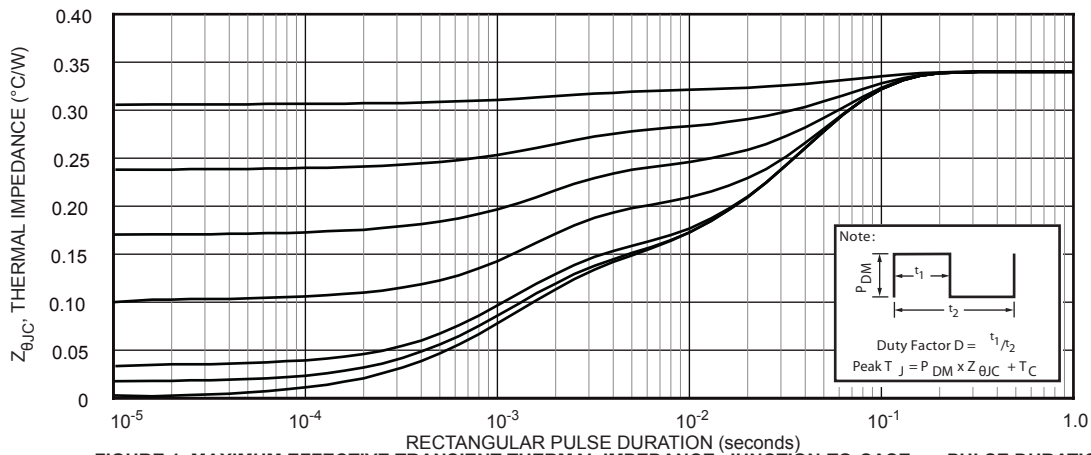


FIGURE 1. MAXIMUM EFFECTIVE TRANSIENT THERMAL IMPEDANCE, JUNCTION-TO-CASE vs. PULSE DURATION

TYPICAL PERFORMANCE CURVES

APT100DL60B_S(G)

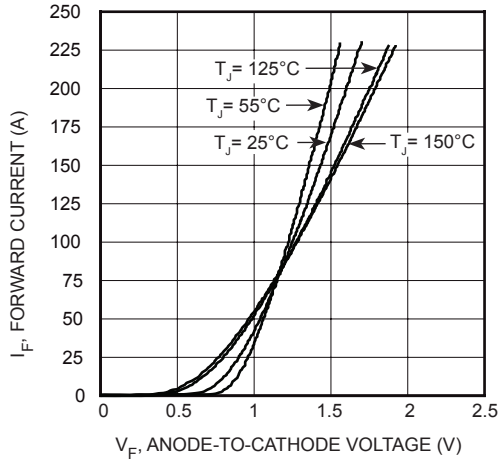


FIGURE 2, Forward Current vs. Forward Voltage

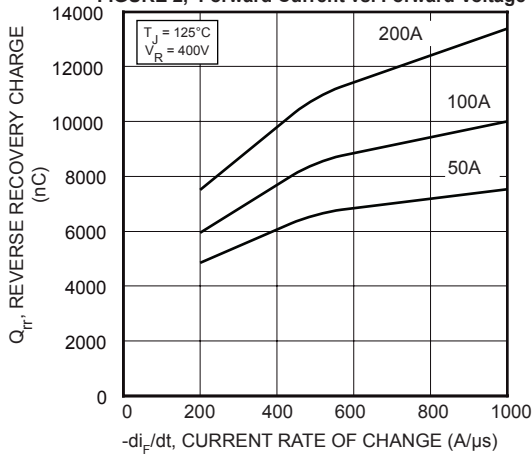


FIGURE 4, Reverse Recovery Charge vs. Current Rate of Change

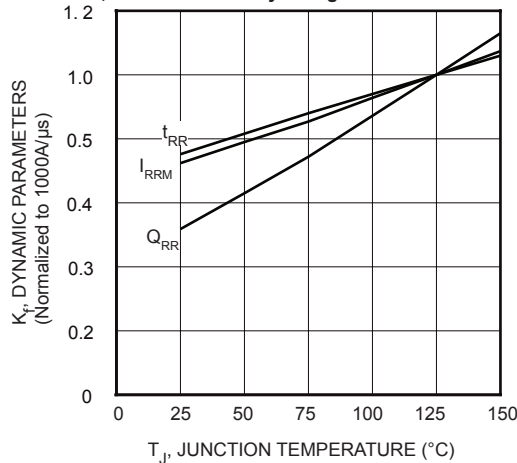


FIGURE 6, Dynamic Parameters vs. Junction Temperature

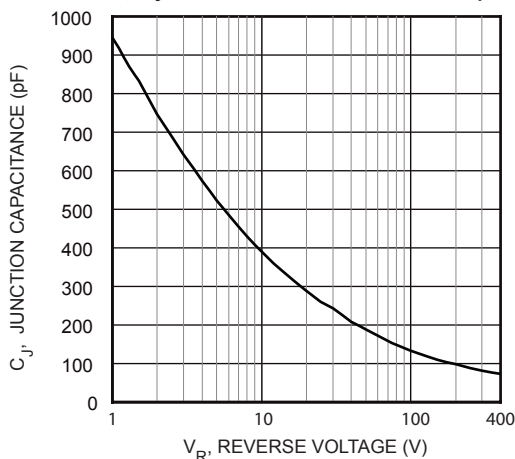


FIGURE 8, Junction Capacitance vs. Reverse Voltage

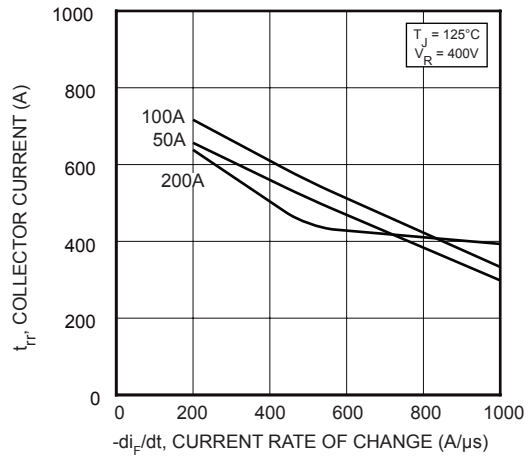


FIGURE 3, Reverse Recovery Time vs. Current Rate of Change

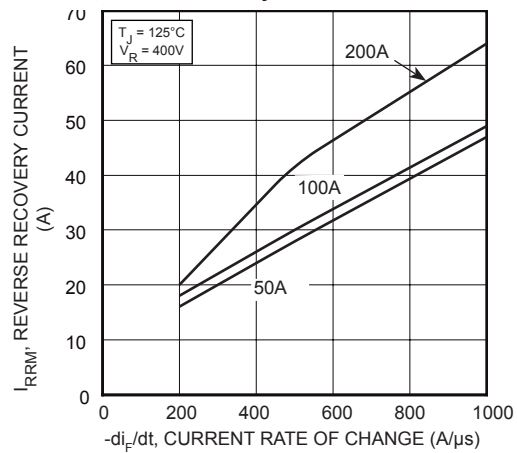


FIGURE 5, Reverse Recovery Current vs. Current Rate of Change

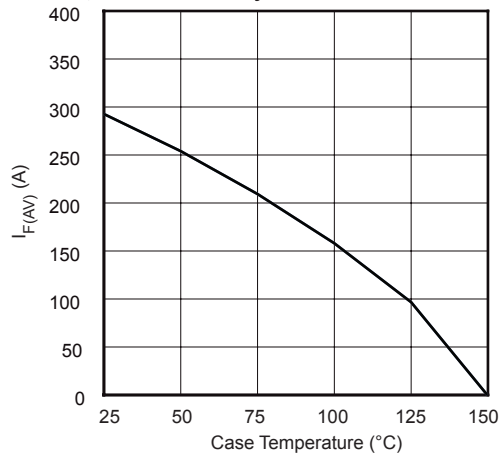


FIGURE 7, Maximum Average Forward Current vs. Case Temperature

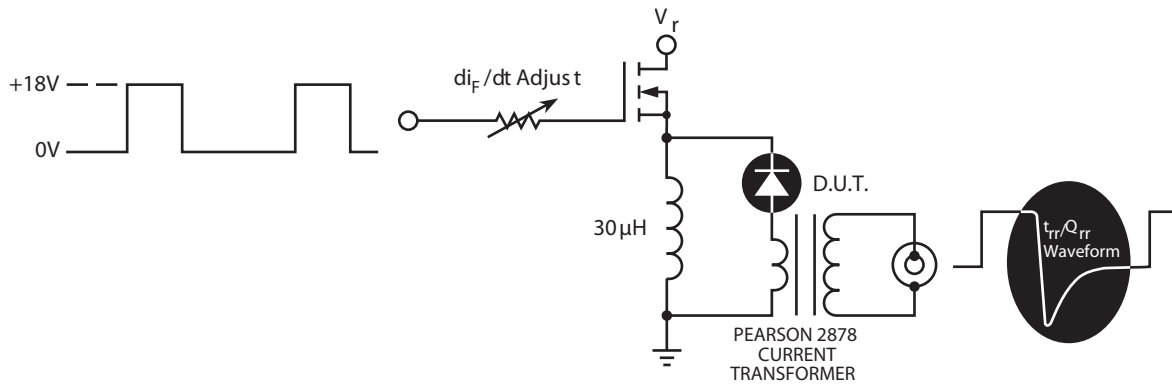


Figure 9. Diode Test Circuit

- 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} .

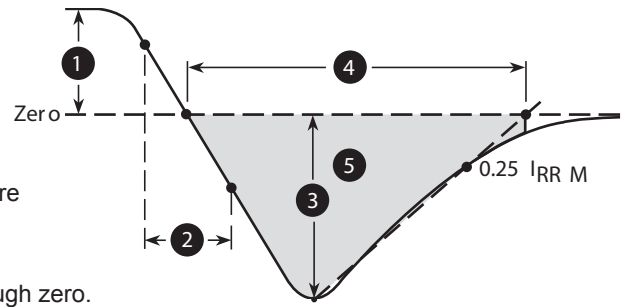
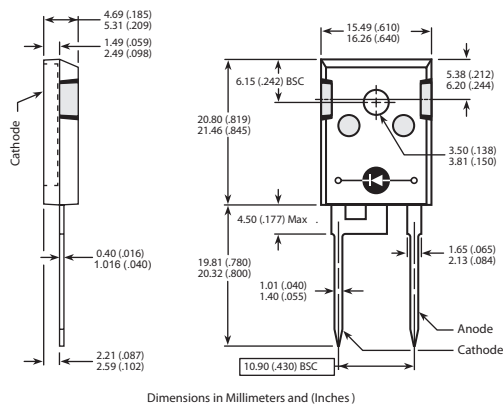


Figure 10. Diode Reverse Recovery Waveform Definition

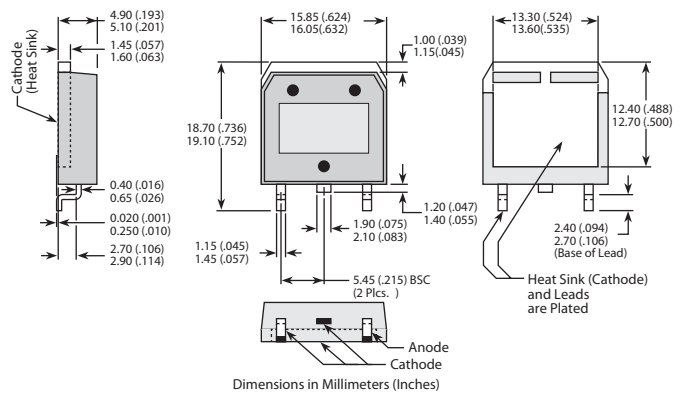
TO-247 Package Outline

e1 SAC: Tin, Silver, Copper



D³PAK Package Outline

e3 100% Sn



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