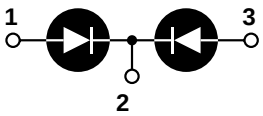
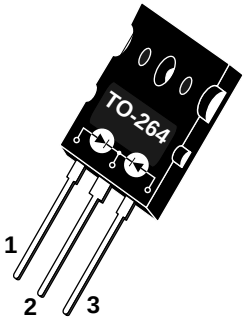


1 - Anode 1
2 - Common Cathode
Back of Case - Cathode
3 - Anode 2



APT60D30LCT 300V 60A

ULTRAFAST SOFT RECOVERY RECTIFIER DIODES

PRODUCT APPLICATIONS	PRODUCT FEATURES	PRODUCT BENEFITS
• Parallel Diode -Switchmode Power Supply -Inverters	• Ultrafast Recovery Times	• Low Losses
• Free Wheeling Diode -Motor Controllers -Converters	• Soft Recovery Characteristics	• Low Noise Switching
• Snubber Diode	• Popular TO-264 Package	• Cooler Operation
• Uninterruptible Power Supply (UPS)	• Low Forward Voltage	• Higher Reliability Systems
• 48 Volt Output Rectifiers	• High Blocking Voltage	• Increased System Power Density
• High Speed Rectifiers	• Low Leakage Current	

MAXIMUM RATINGS All Ratings Are Per Leg: T_C = 25°C unless otherwise specified.

Symbol	Characteristic / Test Conditions	APT60D30LCT	UNIT
V_R	Maximum D.C. Reverse Voltage	300	Volts
V_{RRM}	Maximum Peak Repetitive Reverse Voltage		
V_{RWM}	Maximum Working Peak Reverse Voltage		
$I_F(AV)$	Maximum Average Forward Current (T_C = 90°C, Duty Cycle = 0.5)	60	Amps
$I_F(RMS)$	RMS Forward Current	60	
I_{FSM}	Non-Repetitive Forward Surge Current (T_J = 45°C, 8.3mS)	600	
T_J,T_{STG}	Operating and Storage Temperature Range	-55 to 150	°C
T_L	Lead Temperature: 0.063" from Case for 10 Sec.	300	

STATIC ELECTRICAL CHARACTERISTICS

Symbol	Characteristic / Test Conditions		MIN	TYP	MAX	UNIT
V_F	Maximum Forward Voltage	I_F = 60A			1.4	Volts
		I_F = 120A		1.4		
		I_F = 60A, T_J = 150°C			1.2	
I_{RM}	Maximum Reverse Leakage Current	V_R = V_R Rated			250	µA
		V_R = V_R Rated, T_J = 125°C			500	
C_T	Junction Capacitance, V_R = 200V			140		pF
L_S	Series Inductance (Lead to Lead 5mm from Base)			10		nH

USA 405 S.W. Columbia Street Bend, Oregon 97702-1035 Phone: (541) 382-8028 FAX: (541) 388-0364
EUROPE Chemin de Magret F-33700 Merignac - France Phone: (33) 5 57 92 15 15 FAX: (33) 5 56 47 97 61

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DYNAMIC CHARACTERISTICS

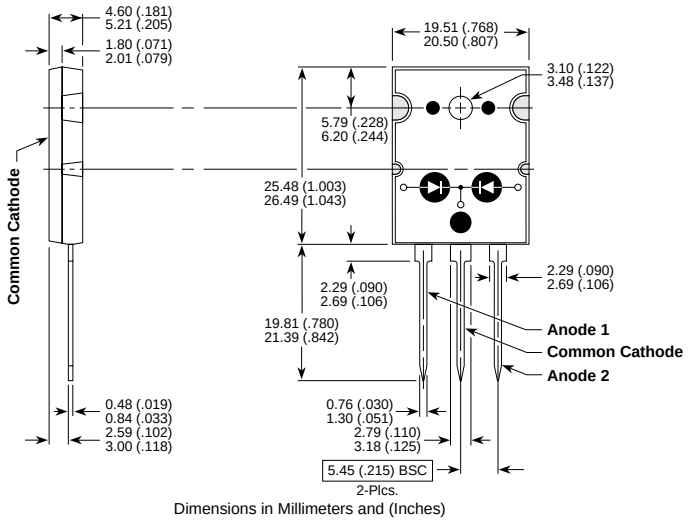
Symbol	Characteristic		MIN	TYP	MAX	UNIT
t_{rr1}	Reverse Recovery Time, I_F = 1.0A, di_F/dt = -15A/µs, V_R = 30V, T_J = 25°C			53	TBD	ns
t_{rr2}	Reverse Recovery Time	T_J = 25°C		45		
t_{rr3}	I_F = 60A, di_F/dt = -480A/µs, V_R = 180V	T_J = 100°C		70		
t_{fr1}	Forward Recovery Time	T_J = 25°C		182		
t_{fr2}	I_F = 60A, di_F/dt = 480A/µs, V_R = 180V	T_J = 100°C		182		
I_{RRM1}	Reverse Recovery Current	T_J = 25°C		12	17	Amps
I_{RRM2}	I_F = 60A, di_F/dt = -480A/µs, V_R = 180V	T_J = 100°C		18	25	
Q_{rr1}	Recovery Charge	T_J = 25°C		315		nC
Q_{rr2}	I_F = 60A, di_F/dt = -480A/µs, V_R = 180V	T_J = 100°C		750		
V_{fr1}	Forward Recovery Voltage	T_J = 25°C		7.5		Volts
V_{fr2}	I_F = 60A, di_F/dt = 480A/µs, V_R = 180V	T_J = 100°C		7.5		
diM/dt	Rate of Fall of Recovery Current	T_J = 25°C		690		A/µS
	I_F = 60A, di_F/dt = -480A/µs, V_R = 180V	T_J = 100°C		845		

THERMAL AND MECHANICAL CHARACTERISTICS

Symbol	Characteristic / Test Conditions	MIN	TYP	MAX	UNIT
$R_{\theta JC}$	Junction-to-Case Thermal Resistance			0.66	°C/W
$R_{\theta JA}$	Junction-to-Ambient Thermal Resistance			40	
W_T	Package Weight		0.35		oz
			9.9		gm
Torque	Maximum Mounting Torque (Screw Type = 6-32 or 3mm Machine)			10	lb•in
				1.1	N•m

APT Reserves the right to change, without notice, the specifications and information contained herein.

TO-264 Package Outline



Dimensions in Millimeters and (Inches)

APT's devices are covered by one or more of the following U.S.patents: 4,895,810 5,045,903 5,089,434 5,182,234 5,019,522 5,262,336 5,256,583 4,748,103 5,283,202 5,231,474 5,434,095 5,528,058

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