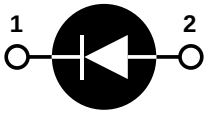
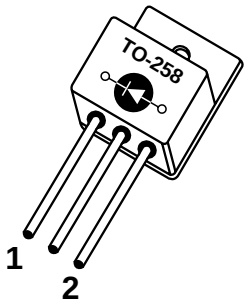


1 - Cathode
2 - Anode
Case Isolated



APT30D60H 600V 30A

ULTRAFAST SOFT RECOVERY RECTIFIER DIODE

PRODUCT APPLICATIONS	PRODUCT FEATURES	PRODUCT BENEFITS
• Anti-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	• Hermetic TO-258 Package	• Cooler Operation
• Uninterruptible Power Supply (UPS)	• Low Forward Voltage	• Higher Reliability Systems
• Induction Heating	• High Blocking Voltage	• Increased System Power Density
• High Speed Rectifiers	• Low Leakage Current	

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

Symbol	Characteristic / Test Conditions	APT30D60H	UNIT
V_R	Maximum D.C. Reverse Voltage	600	Volts
V_{RRM}	Maximum Peak Repetitive Reverse Voltage		
V_{RWM}	Maximum Working Peak Reverse Voltage		
$I_F(AV)$	Maximum Average Forward Current (T_C = 60°C, Duty Cycle = 0.5)	30	Amps
$I_F(RMS)$	RMS Forward Current	40	
I_{FSM}	Non-Repetitive Forward Surge Current (T_J = 45°C, 8.3ms)	200	
T_J,T_{STG}	Operating and StorageTemperature 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 = 30A			2.0	Volts
		I_F = 60A		1.7		
		I_F = 30A, T_J = 150°C			1.8	
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			40		pF
L_S	Series Inductance (Lead to Lead 5mm from Base)			10		nH

APT Website - http://www.advancedpower.com

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

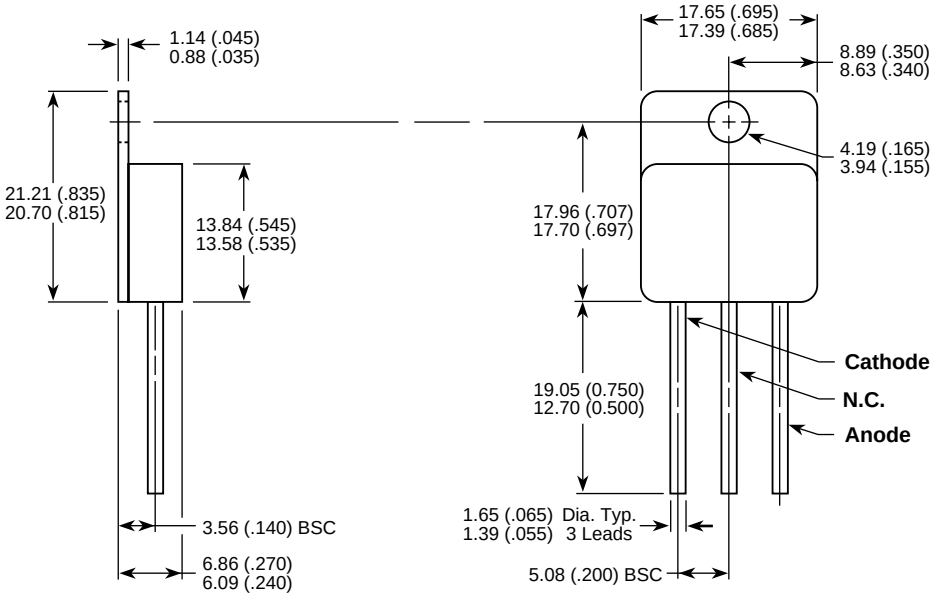
Symbol	Characteristic		MIN	TYP	MAX	UNIT
t_{rr1}	Reverse Recovery Time, I_F = 1.0A, di_F/dt = -15A/µs, V_R = 30V, T_J = 25°C			50	65	ns
t_{rr2}	Reverse Recovery Time	T_J = 25°C		50		
t_{rr3}	I_F = 30A, di_F/dt = -240A/µs, V_R = 350V	T_J = 100°C		80		
t_{fr1}	Forward Recovery Time	T_J = 25°C		155		
t_{fr2}	I_F = 30A, di_F/dt = 240A/µs, V_R = 350V	T_J = 100°C		155		
I_{RRM1}	Reverse Recovery Current	T_J = 25°C		4	10	Amps
I_{RRM2}	I_F = 30A, di_F/dt = -240A/µs, V_R = 350V	T_J = 100°C		7.5	15	
Q_{rr1}	Recovery Charge	T_J = 25°C		100		nC
Q_{rr2}	I_F = 30A, di_F/dt = -240A/µs, V_R = 350V	T_J = 100°C		300		
V_{fr1}	Forward Recovery Voltage	T_J = 25°C		5		Volts
V_{fr2}	I_F = 30A, di_F/dt = 240A/µs, V_R = 350V	T_J = 100°C		5		
diM/dt	Rate of Fall of Recovery Current	T_J = 25°C		400		A/µs
	I_F = 30A, di_F/dt = -240A/µs, V_R = 350V	T_J = 100°C		200		

THERMAL AND MECHANICAL CHARACTERISTICS

Symbol	Characteristic / Test Conditions	MIN	TYP	MAX	UNIT
$R_{\theta JC}$	Junction-to-Case Thermal Resistance			1.5	°C/W
$R_{\theta JA}$	Junction-to-Ambient Thermal Resistance			40	
W_T	Package Weight		0.22		oz
			6.1		gm

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

TO-258 Package Outline



Dimensions in Millimeters and (Inches)

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