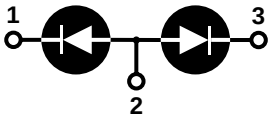
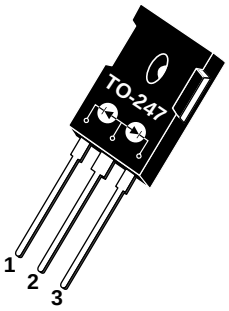


1 - Cathode 1
2 - Anode
3 - Cathode 2
Back of Case - Anode



ADVANCED POWER TECHNOLOGY®

APT30D20BCA 200V 2x30A

ULTRAFAST SOFT RECOVERY RECTIFIER DIODES

PRODUCT APPLICATIONS	PRODUCT FEATURES	PRODUCT BENEFITS
• Parallel Diode -Switchmode Power Supply -Inverters • Free Wheeling Diode -Motor Controllers -Converters • Snubber Diode • Uninterruptible Power Supply (UPS) • Induction Heating • High Speed Rectifiers	• Ultrafast Recovery Times • Soft Recovery Characteristics • Popular TO-247 Package • Low Forward Voltage • High Blocking Voltage • Low Leakage Current	• Low Losses • Low Noise Switching • Cooler Operation • Higher Reliability Systems • Increased System Power Density

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

Symbol	Characteristic / Test Conditions	APT30D20BCA	UNIT
V_R	Maximum D.C. Reverse Voltage	200	Volts
V_{RRM}	Maximum Peak Repetitive Reverse Voltage		
V_{RWM}	Maximum Working Peak Reverse Voltage		
$I_F(AV)$	Maximum Average Forward Current (T_C = 105°C, Duty Cycle = 0.5)	30	Amps
$I_F(RMS)$	RMS Forward Current	70	
I_{FSM}	Non-Repetitive Forward Surge Current (T_J = 45°C, 8.3ms)	320	
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			1.15	Volts
		I_F = 60A		1.05		
		I_F = 30A, T_J = 150°C			1.0	
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 = 150V			110		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

050-5961 rev- 5-2000

DYNAMIC CHARACTERISTICS

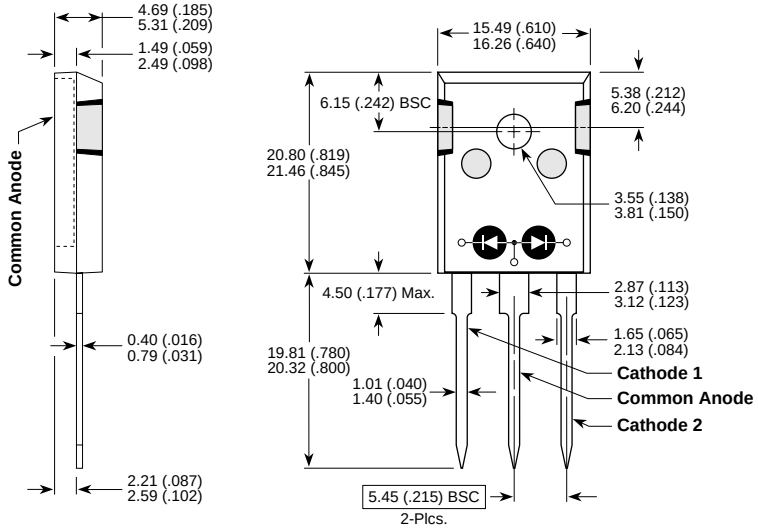
Symbol	Characteristic		MIN	TYP	MAX	UNIT
t_{rr1}	Reverse Recovery Time, I_F = 1.0A, di_F/dt = -15A/µs, V_R = 30V, T_J = 25°C			35	50	ns
t_{rr2}	Reverse Recovery Time	T_J = 25°C		40		
t_{rr3}	I_F = 30A, di_F/dt = -240A/µs, V_R = 100V	T_J = 100°C		60		
t_{fr1}	Forward Recovery Time	T_J = 25°C		155		
t_{fr2}	I_F = 30A, di_F/dt = 240A/µs, V_R = 100V	T_J = 100°C		155		
I_{RRM1}	Reverse Recovery Current	T_J = 25°C		6	8	Amps
I_{RRM2}	I_F = 30A, di_F/dt = -240A/µs, V_R = 100V	T_J = 100°C		10	13	
Q_{rr1}	Recovery Charge	T_J = 25°C		120		nC
Q_{rr2}	I_F = 30A, di_F/dt = -240A/µs, V_R = 100V	T_J = 100°C		300		
V_{fr1}	Forward Recovery Voltage	T_J = 25°C		2.5		Volts
V_{fr2}	I_F = 30A, di_F/dt = 240A/µs, V_R = 100V	T_J = 100°C		2.5		
diM/dt	Rate of Fall of Recovery Current	T_J = 25°C		300		A/µs
	I_F = 30A, di_F/dt = -240A/µs, V_R = 100V	T_J = 100°C		600		

THERMAL AND MECHANICAL CHARACTERISTICS

Symbol	Characteristic / Test Conditions	MIN	TYP	MAX	UNIT
$R_{\theta JC}$	Junction-to-Case Thermal Resistance			1.32	°C/W
$R_{\theta JA}$	Junction-to-Ambient Thermal Resistance			80	
W_T	Package Weight		0.22		oz
			6.1		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-247 Package Outline



Dimensions in Millimeters and (Inches)

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