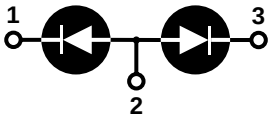
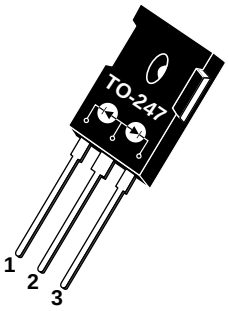


1 - Cathode 1
2 - Anode
3 - Cathode 2
Back of Case - Anode



ADVANCED POWER TECHNOLOGY®

APT15D60BCA 600V 2x15A

ULTRAFAST SOFT RECOVERY RECTIFIER DIODES

PRODUCT APPLICATIONS

- Parallel Diode
  - -Switchmode Power Supply
  - -Inverters
- Free Wheeling Diode
  - -Motor Controllers
  - -Converters
- Snubber Diode
- Uninterruptible Power Supply (UPS)
- Induction Heating
- High Speed Rectifiers

PRODUCT FEATURES

- Ultrafast Recovery Times
- Soft Recovery Characteristics
- Popular TO-247 Package
- Low Forward Voltage
- High Blocking Voltage
- Low Leakage Current

PRODUCT BENEFITS

- 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	APT15D60BCA	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 = 90°C, Duty Cycle = 0.5)	15	Amps
$I_F(RMS)$	RMS Forward Current	25	
I_{FSM}	Non-Repetitive Forward Surge Current (T_J = 45°C, 8.3ms)	110	
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 = 15A			1.8	Volts
		I_F = 30A		1.6		
		I_F = 15A, T_J = 150°C			1.6	
I_{RM}	Maximum Reverse Leakage Current	V_R = V_R Rated			150	µA
		V_R = V_R Rated, T_J = 125°C			500	
C_T	Junction Capacitance, V_R = 200V			16		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

050-5978 rev- 6-2000

DYNAMIC CHARACTERISTICS

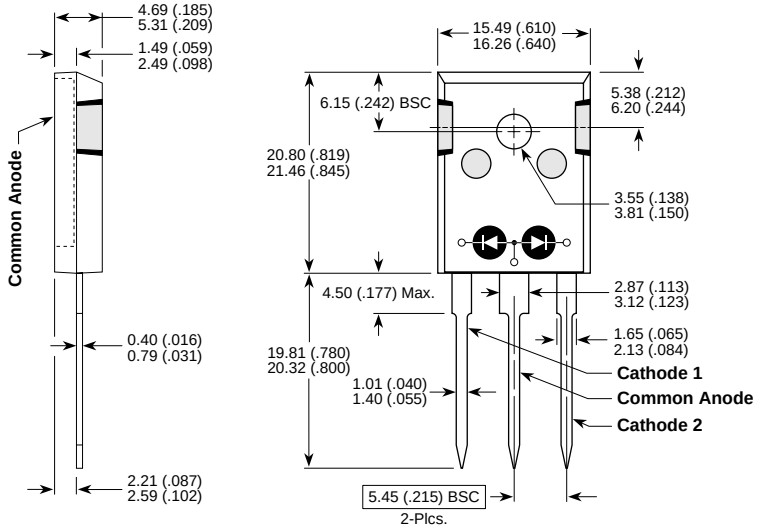
Symbol	Characteristic		MIN	TYP	MAX	UNIT
t_{rr1}	Reverse Recovery Time, I_F = 1.0A, di_F/dt = -15A/µs, V_R = 30V, T_J = 25°C			40	50	ns
t_{rr2}	Reverse Recovery Time	T_J = 25°C		40		
t_{rr3}	I_F = 15A, di_F/dt = -100A/µs, V_R = 350V	T_J = 100°C		80		
t_{fr1}	Forward Recovery Time	T_J = 25°C		170		
t_{fr2}	I_F = 15A, di_F/dt = 100A/µs, V_R = 350V	T_J = 100°C		170		
I_{RRM1}	Reverse Recovery Current	T_J = 25°C		2.5	5	Amps
I_{RRM2}	I_F = 15A, di_F/dt = -100A/µs, V_R = 350V	T_J = 100°C		3	6	
Q_{rr1}	Recovery Charge	T_J = 25°C		50		nC
Q_{rr2}	I_F = 15A, di_F/dt = -100A/µs, V_R = 350V	T_J = 100°C		120		
V_{fr1}	Forward Recovery Voltage	T_J = 25°C		2.2		Volts
V_{fr2}	I_F = 15A, di_F/dt = 100A/µs, V_R = 350V	T_J = 100°C		2.2		
diM/dt	Rate of Fall of Recovery Current	T_J = 25°C		200		A/µs
	I_F = 15A, di_F/dt = -100A/µs, V_R = 350V	T_J = 100°C		100		

THERMAL AND MECHANICAL CHARACTERISTICS

Symbol	Characteristic / Test Conditions	MIN	TYP	MAX	UNIT
$R_{\theta JC}$	Junction-to-Case Thermal Resistance			1.7	°C/W
$R_{\theta JA}$	Junction-to-Ambient Thermal Resistance			40	
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)