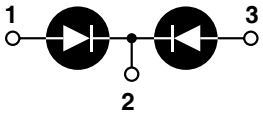
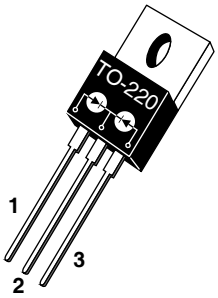


1 - Anode 1
2 - Common Cathode
Back of Case - Cathode
3 - Anode 2



ADVANCED POWER TECHNOLOGY®

APT8DQ60KCT 600V 2X8A

ULTRAFAST SOFT RECOVERY RECTIFIER DIODE

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-220 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 Per Leg: T_C = 25°C unless otherwise specified.

Symbol	Characteristic / Test Conditions	APT8DQ60KCT	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 = 121°C, Duty Cycle = 0.5)	8	Amps
$I_{F(AV)}$	RMS Forward Current (Square wave, 50% duty)	14	
I_{FSM}	Non-Repetitive Forward Surge Current (T_J = 45°C, 8.3ms)	110	
T_J,T_{STG}	Operating and StorageTemperature Range	-55 to 175	°C
T_L	Lead Temperature for 10 Sec.	300	

STATIC ELECTRICAL CHARACTERISTICS

Symbol	Characteristic / Test Conditions		MIN	TYP	MAX	UNIT
V_F	Forward Voltage	I_F = 8A		2.0	2.4	Volts
		I_F = 16A		2.5		
		I_F = 8A, T_J = 125°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			15		pF

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DYNAMIC CHARACTERISTICS

APT8DQ60KCT

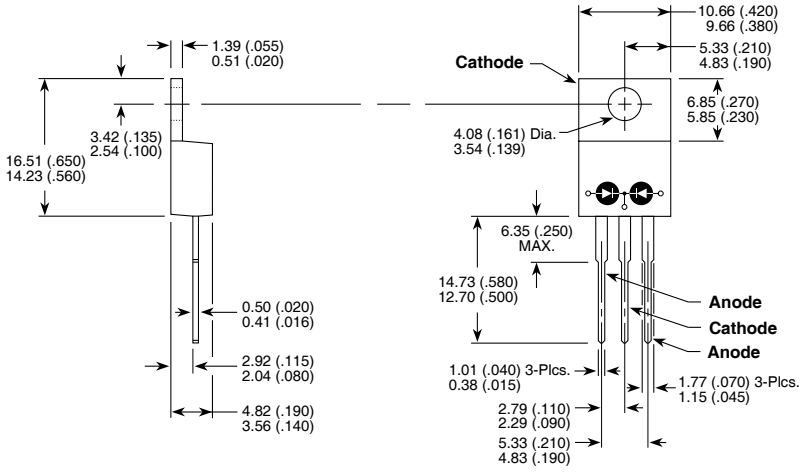
Symbol	Characteristic	Test Conditions	MIN	TYP	MAX	UNIT
t_{rr}	Reverse Recovery Time	I_F = 1A, di_F/dt = -100A/µs, V_R = 30V, T_J = 25°C	-	15		ns
t_{rr}	Reverse Recovery Time	I_F = 8A, di_F/dt = -200A/µs, V_R = 400V, T_C = 25°C	-	18		ns
Q_{rr}	Reverse Recovery Charge		-	20		nC
I_{RRM}	Maximum Reverse Recovery Current		-	1.8	-	Amps
t_{rr}	Reverse Recovery Time	I_F = 8A, di_F/dt = -200A/µs, V_R = 400V, T_C = 125°C	-	85		ns
Q_{rr}	Reverse Recovery Charge		-	200		nC
I_{RRM}	Maximum Reverse Recovery Current		-	4	-	Amps
t_{rr}	Reverse Recovery Time	I_F = 8A, di_F/dt = -1000A/µs, V_R = 400V, T_C = 125°C	-	45		ns
Q_{rr}	Reverse Recovery Charge		-	300		nC
I_{RRM}	Maximum Reverse Recovery Current		-	11		Amps

THERMAL AND MECHANICAL CHARACTERISTICS

Symbol	Characteristic / Test Conditions	MIN	TYP	MAX	UNIT
$R_{\theta JC}$	Junction-to-Case Thermal Resistance			2.70	°C/W
$R_{\theta JA}$	Junction-to-Ambient Thermal Resistance			80	°C/W
W_T	Package Weight		0.07		oz
			1.2		g
Torque	Maximum Mounting Torque			10	lb•in
				1.1	N•m

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

TO-220 (KCT) Package Outline



Dimensions in Millimeters and (Inches)