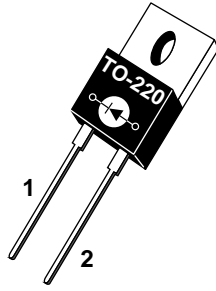


1 - Cathode
2 - Anode
Back of Case - Cathode



**ADVANCED
POWER
TECHNOLOGY®**
APT15D30K 300V 15A

ULTRAFAST SOFT RECOVERY RECTIFIER DIODE

PRODUCT APPLICATIONS

- Anti-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: $T_C = 25^\circ\text{C}$ unless otherwise specified.

Symbol	Characteristic / Test Conditions	APT15D30K	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 ($T_C = 100^\circ\text{C}$, Duty Cycle = 0.5)	15	Amps
$I_F(RMS)$	RMS Forward Current	25	
I_{FSM}	Non-Repetitive Forward Surge Current ($T_J = 45^\circ\text{C}$, 8.3ms)	110	
T_J, T_{STG}	Operating and Storage Temperature Range	-55 to 150	$^\circ\text{C}$
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			1.4	Volts
				$I_F = 15\text{A}$	
				$I_F = 30\text{A}$	
I_{RM}	Maximum Reverse Leakage Current			150	μA
				$V_R = V_R$ Rated	
C_T	Junction Capacitance, $V_R = 200\text{V}$		N/A		pF
L_S	Series Inductance (Lead to Lead 5mm from Base)		N/A		nH

USA
405 S.W. Columbia Street
EUROPE
Avenue J.F. Kennedy Bât B4 Parc Cadéra Nord

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

Bend, Oregon 97702-1035

Phone: (541) 382-8028

FAX: (541) 388-0364

F-33700 Merignac - France

Phone: (33) 557 92 15 15

FAX: (33) 556 47 97 61

DYNAMIC CHARACTERISTICS

APT15D30K

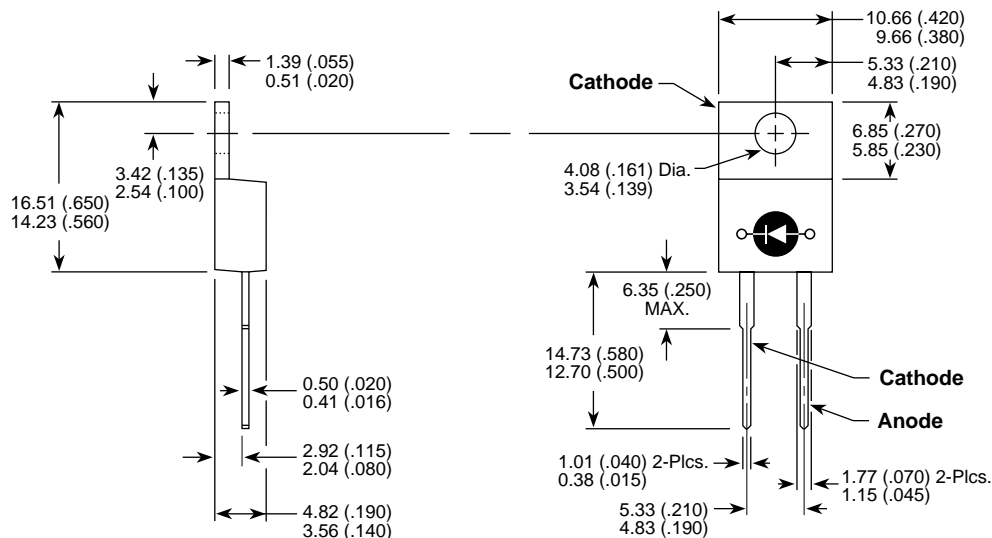
Symbol	Characteristic	MIN	TYP	MAX	UNIT
t_{rr1}	Reverse Recovery Time, $I_F = 1.0A$, $di_F/dt = -15A/\mu s$, $V_R = 30V$, $T_J = 25^\circ C$		40	50	ns
t_{rr2}	Reverse Recovery Time	$T_J = 25^\circ C$	35		
t_{rr3}	$I_F = 15A$, $di_F/dt = -100A/\mu s$, $V_R = 180V$	$T_J = 100^\circ C$	60		
t_{fr1}	Forward Recovery Time	$T_J = 25^\circ C$	170		
t_{fr2}	$I_F = 15A$, $di_F/dt = 100A/\mu s$, $V_R = 180V$	$T_J = 100^\circ C$	170		
I_{RRM1}	Reverse Recovery Current	$T_J = 25^\circ C$	2	3	Amps
I_{RRM2}	$I_F = 15A$, $di_F/dt = -100A/\mu s$, $V_R = 180V$	$T_J = 100^\circ C$	3.5	5	
Q_{rr1}	Recovery Charge	$T_J = 25^\circ C$	45		nC
Q_{rr2}	$I_F = 15A$, $di_F/dt = -100A/\mu s$, $V_R = 180V$	$T_J = 100^\circ C$	135		
V_{fr1}	Forward Recovery Voltage	$T_J = 25^\circ C$	1.6		Volts
V_{fr2}	$I_F = 15A$, $di_F/dt = 100A/\mu s$, $V_R = 180V$	$T_J = 100^\circ C$	1.6		
diM/dt	Rate of Fall of Recovery Current	$T_J = 25^\circ C$	150		A/ μs
	$I_F = 15A$, $di_F/dt = -100A/\mu s$, $V_R = 180V$	$T_J = 100^\circ C$	100		

THERMAL AND MECHANICAL CHARACTERISTICS

Symbol	Characteristic / Test Conditions	MIN	TYP	MAX	UNIT
$R_{\theta JC}$	Junction-to-Case Thermal Resistance			1.7	$^\circ C/W$
$R_{\theta JA}$	Junction-to-Ambient Thermal Resistance			80	
W_T	Package Weight		0.07		oz
			1.9		gm
Torque	Maximum Mounting Torque (Screw Type = 6-32 or 3.5mm Machine)			6.4	lb•in
				0.7	N•m

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

TO-220AB Package Outline





LittleDiode supplies new, hard to find or obsolete electronic components and semiconductors all over the world.

With over two million different components listed you are sure to find the part you need.

Feel free to visit us today at our online store:

LittleDiode.com

Looking forward to providing you with the best possible service.