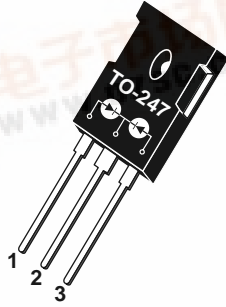
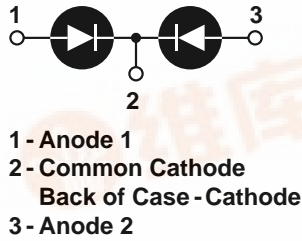


[查询APT30D40BCT供应商](#)

[捷多邦, 专业PCB打样工厂, 24小时加急出货](#)



APT30D40BCT 400V 2x30A

ULTRAFAST SOFT RECOVERY RECTIFIER DIODES

PRODUCT APPLICATIONS	PRODUCT FEATURES	PRODUCT BENEFITS
<ul style="list-style-type: none"> • Parallel Diode <ul style="list-style-type: none"> -Switchmode Power Supply -Inverters • Free Wheeling Diode <ul style="list-style-type: none"> -Motor Controllers -Converters • Snubber Diode • Uninterruptible Power Supply (UPS) • Induction Heating • High Speed Rectifiers 	<ul style="list-style-type: none"> • Ultrafast Recovery Times • Soft Recovery Characteristics • Popular TO-247 Package • Low Forward Voltage • High Blocking Voltage • Low Leakage Current 	<ul style="list-style-type: none"> • Low Losses • Low Noise Switching • Cooler Operation • Higher Reliability Systems • Increased System Power Density

MAXIMUM RATINGS

All Ratings Are Per Leg: $T_C = 25^\circ\text{C}$ unless otherwise specified.

Symbol	Characteristic / Test Conditions	APT30D40BCT	UNIT
V_R	Maximum D.C. Reverse Voltage	400	Volts
V_{RRM}	Maximum Peak Repetitive Reverse Voltage		
V_{RWM}	Maximum Working Peak Reverse Voltage		
$I_F(AV)$	Maximum Average Forward Current ($T_C = 105^\circ\text{C}$, Duty Cycle = 0.5)	30	Amps
$I_F(RMS)$	RMS Forward Current	70	
I_{FSM}	Non-Repetitive Forward Surge Current ($T_J = 45^\circ\text{C}$, 8.3ms)	320	
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			1.5	Volts
				$I_F = 30\text{A}$	
				$I_F = 60\text{A}$	
I_{RM}	Maximum Reverse Leakage Current			1.3	μA
				$V_R = V_R \text{ Rated}$	
				$V_R = V_R \text{ Rated}, T_J = 125^\circ\text{C}$	
C_T	Junction Capacitance, $V_R = 200\text{V}$		52		pF
L_S	Series Inductance (Lead to Lead 5mm from Base)		10		nH

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

405 S.W. Columbia Street

Bend, Oregon 97702-1035

Phone: (541) 382-8028

FAX: (541) 388-0364

Avenue J.F. Kennedy, Bât B4 Parc Cadéra Nord

F-33700 Merignac - France

Phone: (33) 5 57 92 15 15

FAX: (33) 5 56 47 97 61

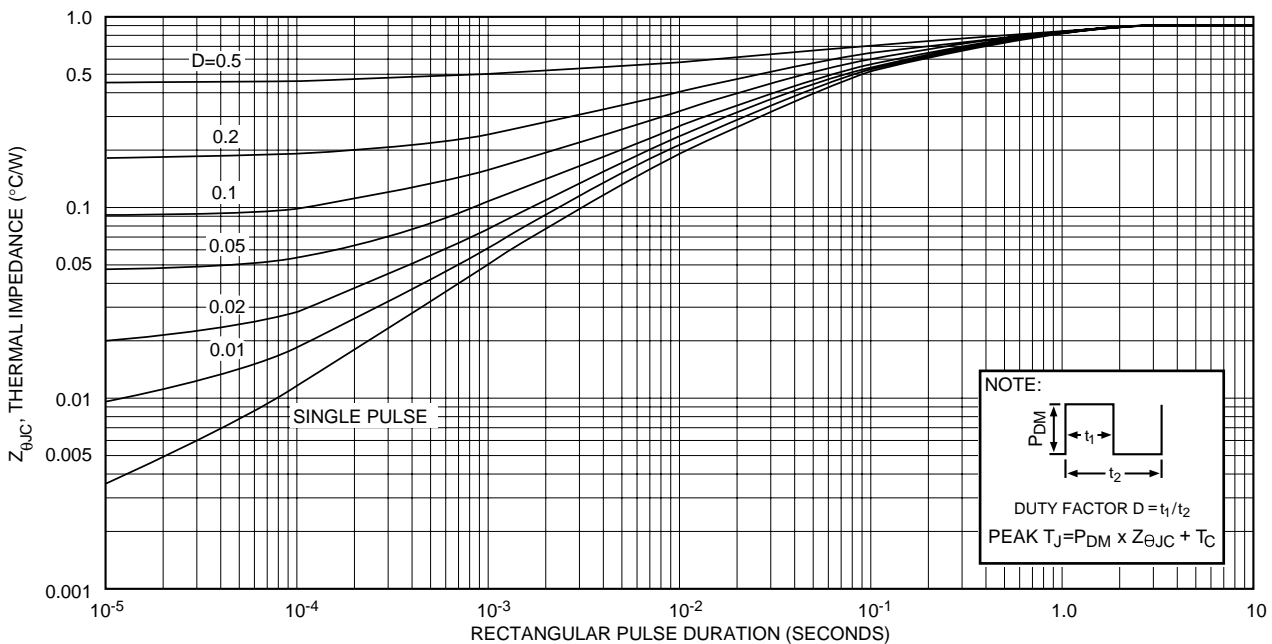
DYNAMIC CHARACTERISTICS

APT30D40BCT

Symbol	Characteristic	MIN	TYP	MAX	UNIT
t_{rr1}	Reverse Recovery Time, $I_F = 1.0A$, $di_F/dt = -15A/\mu s$, $V_R = 30V$, $T_J = 25^\circ C$		45	65	ns
t_{rr2}	Reverse Recovery Time	$T_J = 25^\circ C$	45		
t_{rr3}	$I_F = 30A$, $di_F/dt = -240A/\mu s$, $V_R = 240V$	$T_J = 100^\circ C$	70		
t_{fr1}	Forward Recovery Time	$T_J = 25^\circ C$	150		
t_{fr2}	$I_F = 30A$, $di_F/dt = 240A/\mu s$, $V_R = 240V$	$T_J = 100^\circ C$	150		
I_{RRM1}	Reverse Recovery Current	$T_J = 25^\circ C$	6	10	Amps
I_{RRM2}	$I_F = 30A$, $di_F/dt = -240A/\mu s$, $V_R = 240V$	$T_J = 100^\circ C$	10	18	
Q_{rr1}	Recovery Charge	$T_J = 25^\circ C$	135		nC
Q_{rr2}	$I_F = 30A$, $di_F/dt = -240A/\mu s$, $V_R = 240V$	$T_J = 100^\circ C$	350		
V_{fr1}	Forward Recovery Voltage	$T_J = 25^\circ C$	3.2		Volts
V_{fr2}	$I_F = 30A$, $di_F/dt = 240A/\mu s$, $V_R = 240V$	$T_J = 100^\circ C$	3.2		
diM/dt	Rate of Fall of Recovery Current $I_F = 30A$, $di_F/dt = -240A/\mu s$, $V_R = 240V$ (See Figure 10)	$T_J = 25^\circ C$	500		A/ μs
		$T_J = 100^\circ C$	500		

THERMAL AND MECHANICAL CHARACTERISTICS

Symbol	Characteristic / Test Conditions	MIN	TYP	MAX	UNIT
$R_{\theta JC}$	Junction-to-Case Thermal Resistance			0.90	$^\circ C/W$
$R_{\theta JA}$	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



APT30D40BCT

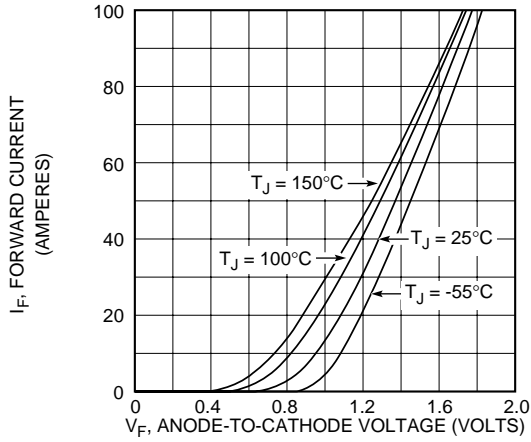


Figure 2, Forward Voltage Drop vs Forward Current

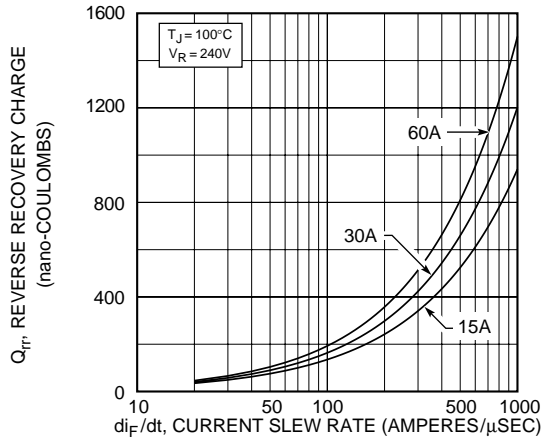


Figure 3, Reverse Recovery Charge vs Current Slew Rate

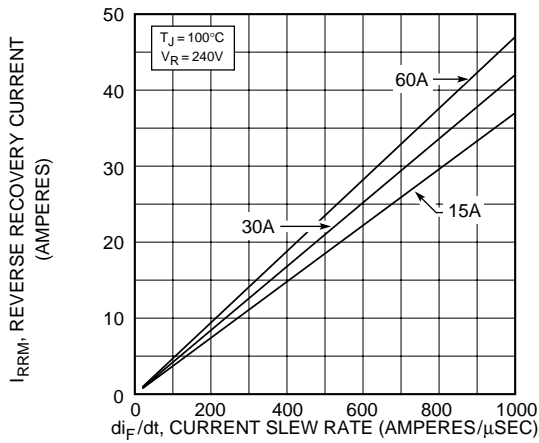


Figure 4, Reverse Recovery Current vs Current Slew Rate

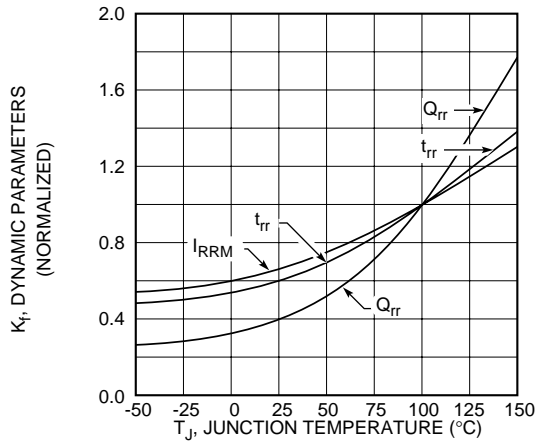


Figure 5, Dynamic Parameters vs Junction Temperature

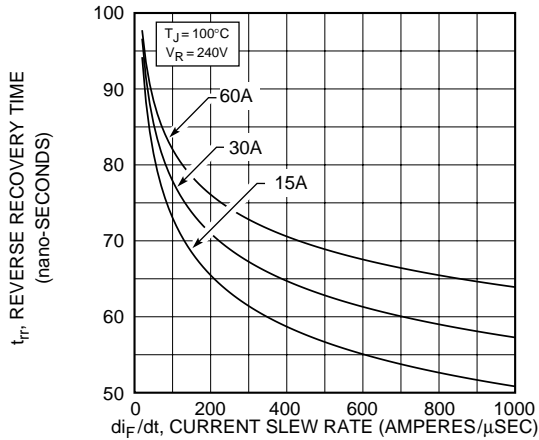


Figure 6, Reverse Recovery Time vs Current Slew Rate

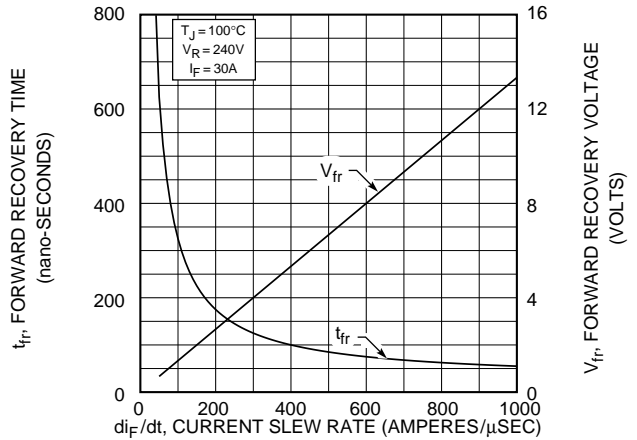


Figure 7, Forward Recovery Voltage/Time vs Current Slew Rate

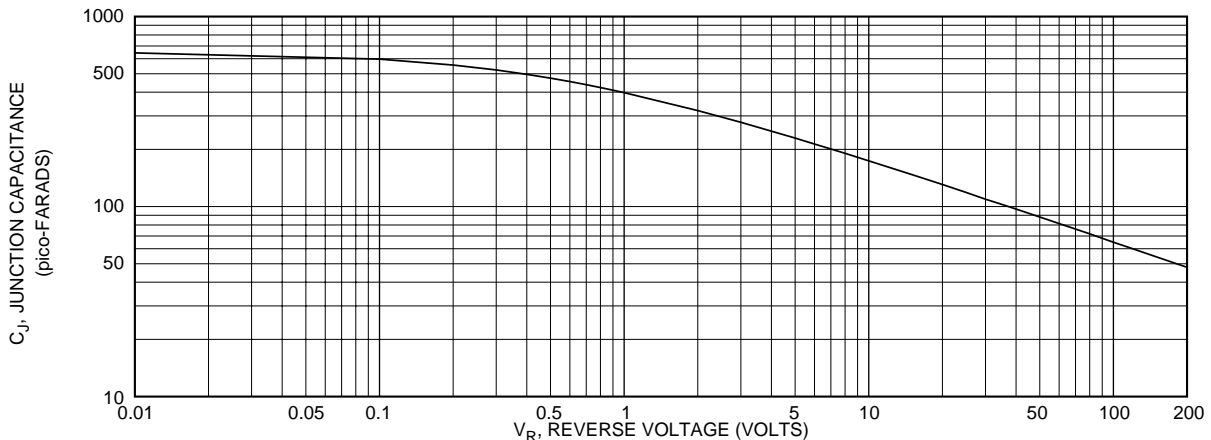


Figure 8, Junction Capacitance vs Reverse Voltage

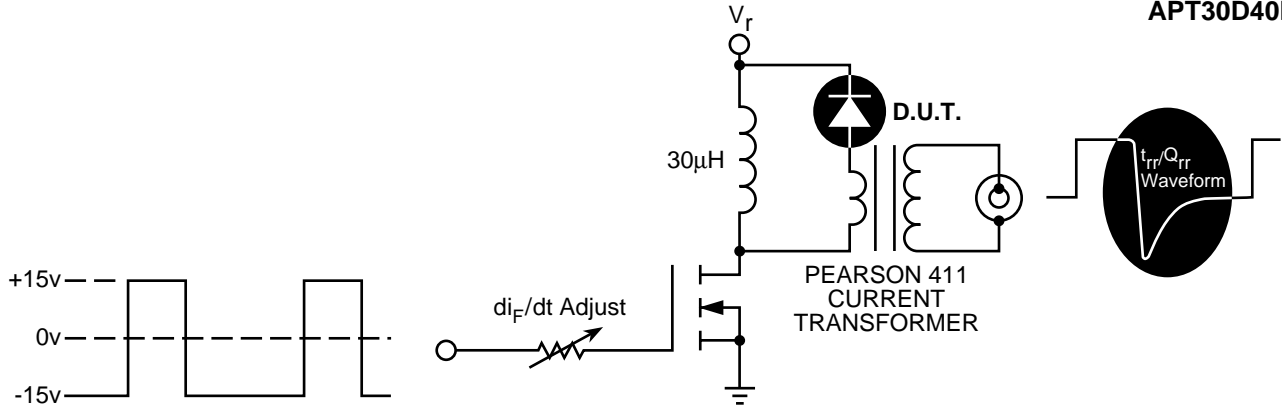


Figure 9, Diode Reverse Recovery Test Circuit and Waveforms

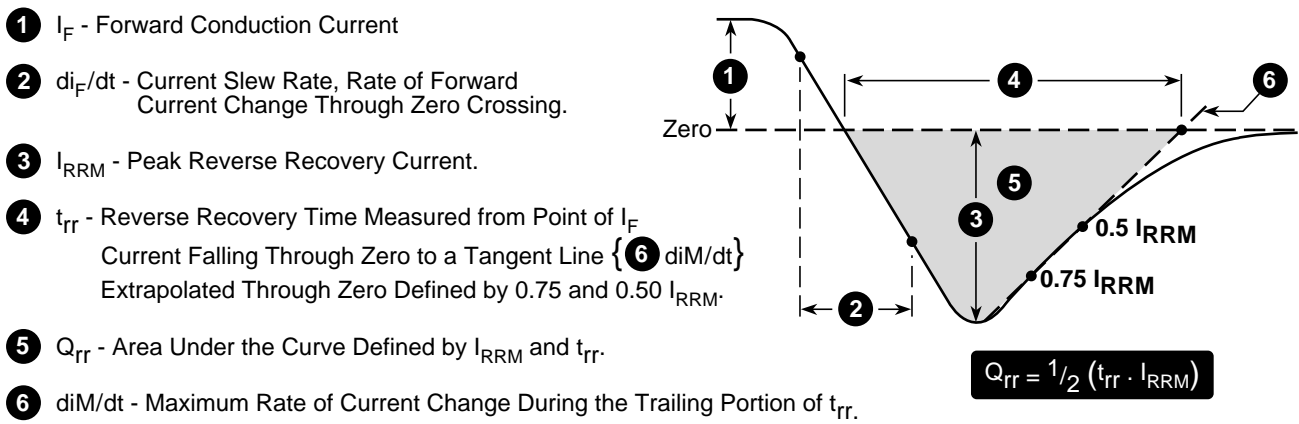
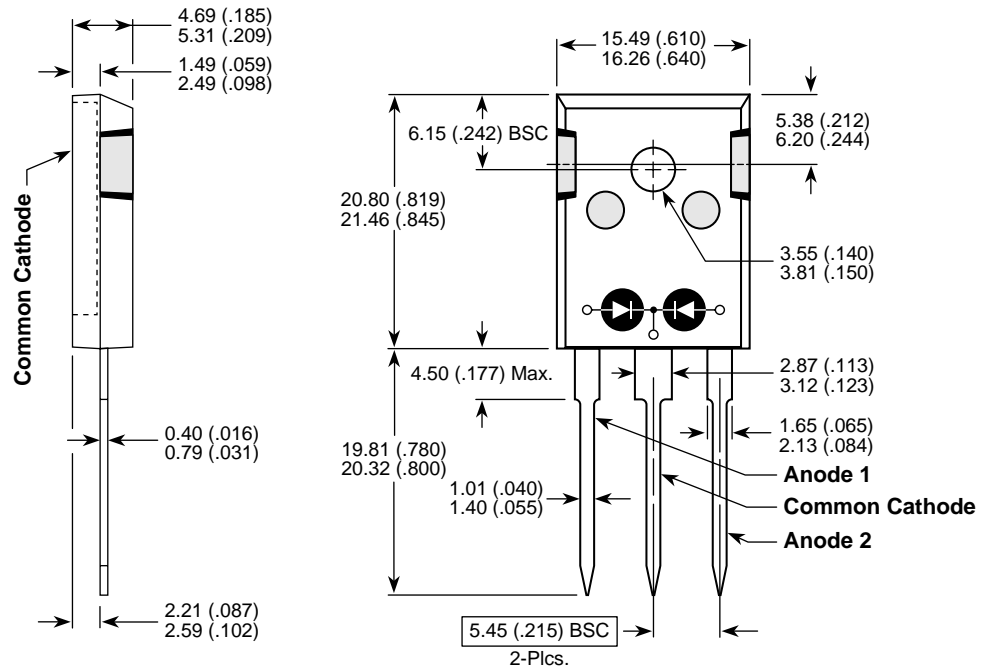


Figure 10, Diode Reverse Recovery Waveform and Definitions

TO-247AD Package Outline



Dimensions in Millimeters and (Inches)