



ADVANCED POWER TECHNOLOGY®

APT2X60D120J 1200V 60A
APT2X61D120J 1200V 60A

DUAL DIE ISOTOP® PACKAGE

ULTRAFAST SOFT RECOVERY DUAL RECTIFIER DIODES

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 SOT-227 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	APT2X60/2X61D120J	UNIT
V_R	Maximum D.C. Reverse Voltage	1200	Volts
V_{RRM}	Maximum Peak Repetitive Reverse Voltage		
V_{RWM}	Maximum Working Peak Reverse Voltage		
$I_F(AV)$	Maximum Average Forward Current ($T_C = 60^\circ\text{C}$, Duty Cycle = 0.5)	60	Amps
$I_F(RMS)$	RMS Forward Current	100	
I_{FSM}	Non-Repetitive Forward Surge Current ($T_J = 45^\circ\text{C}$, 8.3ms)	540	
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		2.0	2.5	Volts
				2.0	
I_{RM}	Maximum Reverse Leakage Current			250	μA
				500	
C_T	Junction Capacitance, $V_R = 200\text{V}$		60		pF
L_S	Series Inductance (Lead to Lead 5mm from Base)		10		nH

APT2X60/2X61D120J

THERMAL AND MECHANICAL CHARACTERISTICS

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

APT-227 Package Outline

Top View Dimensions:

- Overall Width: 31.5 (1.240) / 31.7 (1.248)
- Pin Pitch: 7.8 (.307) / 8.2 (.322)
- Pin Width: W=4.1 (.161) / W=4.3 (.169)
- Pin Height: H=4.8 (.187) / H=4.9 (.193) (4 places)
- Radius: r = 4.0 (.157) (2 places)
- Central Slot Width: 4.0 (.157) / 4.2 (.165) (2 places)
- Bottom Width: 3.3 (.129) / 3.6 (.143)
- Bottom Pin Pitch: 14.9 (.587) / 15.1 (.594)
- Bottom Pin Width: 30.1 (1.185) / 30.3 (1.193)
- Bottom Overall Width: 38.0 (1.496) / 38.2 (1.504)

Side View Dimensions:

- Overall Height: 11.8 (.463) / 12.2 (.480)
- Mounting Flange Height: 8.9 (.350) / 9.6 (.378)
- Hex Nut M4 H100 (4 places)
- Central Slot Depth: 0.75 (.030) / 0.85 (.033)
- Slot Width: 12.6 (.496) / 12.8 (.504)
- Overall Depth: 25.2 (0.992) / 25.4 (1.000)

End View Dimensions:

- Overall Width: 1.95 (.077) / 2.14 (.084)

Anti-parallel APT2X60D120J

Pin Configuration:

- Anode 2 (Top Left)
- Cathode 1 (Top Right)
- Cathode 2 (Bottom Left)
- Anode 1 (Bottom Right)

Parallel APT2X61D120J

Pin Configuration:

- Cathode 2 (Top Left)
- Anode 2 (Top Right)
- Cathode 1 (Bottom Left)
- Anode 1 (Bottom Right)

Dimensions in Millimeters and Inches