



**ADVANCED
POWER
TECHNOLOGY®**

APT2X30D20J 200V 30A
APT2X31D20J 200V 30A

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 are per diode: $T_C = 25^\circ\text{C}$ unless otherwise specified.

Symbol	Characteristic / Test Conditions	APT2X30/2X31D20J	UNIT
V_R	Maximum D.C. Reverse Voltage	200	Volts
V_{RRM}	Maximum Peak Repetitive Reverse Voltage		
V_{RWM}	Maximum Working Peak Reverse Voltage		
$I_F(AV)$	Maximum Average Forward Current ($T_C = 110^\circ\text{C}$, 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		1.05	1.15	Volts
				1.0	
I_{RM}	Maximum Reverse Leakage Current			250	μA
				500	
C_T	Junction Capacitance, $V_R = 150\text{V}$		110		pF
L_S	Series Inductance (Lead to Lead 5mm from Base)		10		nH

APT2X30/2X31D20J

THERMAL AND MECHANICAL CHARACTERISTICS

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

Technical drawing of the APT2X30D20J and APT2X31D20J components. The drawing includes a top view of the four-terminal component with dimensions in millimeters and inches. Key dimensions include overall width (31.5 mm), terminal pitch (7.8 mm), and terminal width (4.1 mm). A side view shows the component's profile with dimensions like 11.8 mm and 12.2 mm. A detail view of the terminal shows a hex nut M4 H100. The drawing also includes a table of dimensions in millimeters and inches.

Dimension	Value (mm)	Value (inches)
Overall Width	31.5	1.240
Terminal Pitch	7.8	0.307
Terminal Width	4.1	0.161
Terminal Height	4.8	0.187
Terminal Spacing	3.3	0.129
Terminal Diameter	14.9	0.587
Terminal Spacing	30.1	1.185
Terminal Spacing	30.3	1.193
Terminal Spacing	38.0	1.496
Terminal Spacing	38.2	1.504
Terminal Spacing	11.8	0.463
Terminal Spacing	12.2	0.480
Terminal Spacing	8.9	0.350
Terminal Spacing	9.6	0.378
Terminal Spacing	25.2	0.992
Terminal Spacing	25.4	1.000
Terminal Spacing	0.75	0.030
Terminal Spacing	0.85	0.033
Terminal Spacing	12.6	0.496
Terminal Spacing	12.8	0.504
Terminal Spacing	1.95	0.077
Terminal Spacing	2.14	0.084