



# X-Band

## TRAVELING WAVE TUBE POWER AMPLIFIERS

### FOR SATELLITE UPLINK APPLICATIONS



#### MT3200A/MT4000

**Powers:**

400W, 750W, 850W PK

**Dimensions:**

5.25" [134.0mm] H (MT3200A)

7.0" [178.0mm] H (MT4000)

19.0" [483.0mm] W

24.0" [610.0mm] L

**Weight:**

(MT3200A)

65 lbs. (29.5kg) nominal

(MT4000)

75 lbs. (34.0kg) nominal



#### MT7100

**Powers:**

2.0kW, 2.25kW, 2.5kW

**Dimensions:**

19.3" [489.0mm] H

19.0" [483.0mm] W

24.0" [610.0mm] L

**Weight:**

204 lbs. (93.0kg) nominal



#### MT2500

**Powers:**

200W

**Dimensions:**

9.7" [246.0mm] H

9.3" [237.0mm] W

18.5" [471.0mm] L

**Weight:**

33 lbs. (15.0kg) nominal



#### MT3400

**Powers:**

400W

**Dimensions:**

9.6" [244.0mm] H

11.8" [300.0mm] W

20.6" [522.0mm] L

**Weight:**

65 lbs. (29.5kg) nominal

#### AVAILABLE SYSTEM OPTIONS:

1 + 1 Redundant System

1 + 2 Redundant System

Phase Combined, Single and Dual Path Redundant Systems

Other Configurations Available Upon Request

#### AVAILABLE AMPLIFIER OPTIONS:

L-Band Block Upconverter

Switchover Control

Linearizer

Mounting Configurations

Remote Controller

Hand-Held Local Controller

Ethernet Interface

Chassis Color (Antenna Mount Only)

Other Options Available Upon Request



#### MT4400

**Powers:**

750W, 850W PK

**Dimensions:**

11.9" [304.0mm] H

14.3" [364.0mm] W

23.1" [588.0mm] L

**Weight:**

84 lbs. (38.0kg) nominal

## X-Band TWTA FEATURES:

Rugged Construction

Calibrated RF Output Monitor

Dual Communications Interfaces

Continuous RF Attenuator Adjustment in 0.1 dB Steps

Automatic Output Power Control

Output Power Reported on the Communication Interfaces

Extensive Diagnostic Capability

Time Stamped Event Log

Automatic Filament Shutdown

Industry-Leading Operating Temperature Range

ISO 9001



# X-Band

## SPECIFICATIONS

Installation	Indoor						Outdoor			
Model	MT3200A		MT4000		MT7100		MT2500	MT3400		MT4400
Electrical Specifications										
Frequency (GHz)					Dual-Band 5.85-6.425/7.9-8.4					
TWT Power	400W CW	750W CW	850W Peak	1.0kW CW C-Band 2.0kW CW X-Band	2.25kW CW	2.50kW CW	200W CW	400W CW	750W CW	850W Peak
*HPA Rated Peak Power	N/A		*760W	N/A						*760W Peak
HPA Max CW (Flange)	N/A		450W CW	N/A						450W CW
*HPA Rated CW (Flange)	360W CW	665W CW	N/A	0.9kW CW C-Band 1.8kW CW X-Band	2.0kW CW	2.25kW CW	175W CW	360W CW	665W CW	N/A
IM3 with Linearizer At 4 dB TPBO	At 145W	At 265W	At 300W	At 360W C-Band At 715W X-Band	At 800W	At 900W	At 70W	At 145W	At 265W	At 300W
IM3 without Linearizer At 4 dB TPBO	-18dBc At 145W	-18dBc At 265W	-18dBc At 300W	-16dBc At 360W C-Band At 715W X-Band	-16dBc At 800W	-16dBc At 900W	-18dBc At 70W	-18dBc At 145W	-18dBc At 265W	-18dBc At 300W
Environmental Specifications										
Operating Temperature	-10°C to +50°C		0°C to +50°C		-10°C to +50°C		-40°C to +60°C	Standard: -40°C to +50°C Optional: -40°C to +60°C		
	(derate by 1.9°C per 1,000 ft. above sea level)									
Non-Operating Temperature	-40°C to +70°C						50°C to +70°C			
Relative Humidity	95% Non-Condensing						100% Condensing			
Operating Altitude	10,000 ft. above sea level (3,048m)									
Non-Operating Altitude	50,000 ft. above sea level (15,240m)									
Vibration	MIL-STD-810E, Method 514.4, Proc. 1, Cat. 1									
Shock	10g, 11 ms half sine									
Mechanical Specifications										
RF Connectors	Input: SMA Female Output: WR-112F			Input: Type-N Female Dual-Band Output: CPR-137F Output: WR-112F			Input: Type-N Female Output: WR-112F			
Cooling	Forced air, 2.0" clearance required									
Acoustic Noise	<68 dBA max. at 1 meter			<72 dBA max. at 1 meter			<68 dBA max. at 1 meter			
Air Flow	100 CFM	190 CFM		RF Drawer: 230 CFM PS Drawer: 150 CFM			72 CFM	150 CFM	250 CFM	
Physical Specifications										
Dimensions	5.25" H x 19.0" x 24.0" L (134mm x 483mm x 610mm) 3RU 19 inch rack mount	7.0" H x 19.0" W x 24.0" L (178mm x 483mm x 610mm) 4RU 19 inch rack mount		19.3" H x 19.0" W x 24.0" L (489mm x 483mm x 610mm) 11RU 19 inch rack mount			9.7" H x 9.3" x 18.5" L (246mm x 237mm x 471mm)	9.6" H x 11.8" W x 20.6" L (244mm x 300mm x 522mm)	11.9" H x 14.3" W x 23.1" L (304mm x 364mm x 588mm)	
Installed Weight	65 lbs. nominal (29.5 kg)	75 lbs. nominal (34 kg)		204 lbs. nominal (93 kg)			33 lbs. nominal (15.0 kg)	65 lbs. nominal (29.5 kg)	84 lbs. nominal (38 kg)	

\*Used to calculate Total Power Back-off (TPBO) Start Point.

Note: Performance information is subject to change without notification. Contact MCL for the latest specifications.