



11361 Sunrise Park Drive, Rancho Cordova, Calif. 95742-6587
 Telephone (916) 638-3344 Fax (916) 636-7453

This model number is controlled by the International Traffic in Arms Regulations, and can only be exported via a U.S. Department of State export license. They may not be transferred, transhipped on a non-continuous voyage, or otherwise be disposed of in any other country, either in their original form or after being incorporated into other end-items, without the prior written approval of the U.S. Department of State.

MODEL NO. MTI 3948

8.8 to 10.5 GHz

TYPICAL OPERATING CONDITIONS			POWER SUPPLY REQUIREMENTS		
ELEMENT	VOLTAGE	CURRENT	VOLTAGE MIN	VOLTAGE MAX	CURRENT MAX
HEATER	-6.3 Vdc	2.2 A	-6.1 Vdc	-6.5 Vdc	2.5 A
HELIX	W/RF	GROUND	GROUND		800 mApk
	W/O RF				
		75 mApk			
GRID ON	250 Vpk	0	50 Vpk	250 Vpk	30 mApk
GRID OFF	-300 Vdc	0	-300 Vdc	-500 Vdc	0.5 mA
CATHODE (Ek)	-14.2 kV	2.5 Apk	-14.0 kV	-15 kV	2.5 Apk
COLLECTOR #1 W/ RF	11 kV	2.13 Apk	75% X Ek ±2%		2.5 Apk

NOTE 1: CATHODE VOLTAGE IS MEASURED WITH RESPECT TO GROUND.
 NOTE 2: HEATER, COLLECTOR AND GRID VOLTAGES ARE MEASURED WITH RESPECT TO CATHODE.

SELECTED PERFORMANCE	TYPICAL	SPECIFIED
INPUT VSWR	1.5:1	2.0:1
OUTPUT VSWR	1.5:1	1.8:1
MAXIMUM DUTY	—	2%
MAXIMUM PULSEWIDTH	—	50 μsec
GRID CAPACITANCE	40 pF	60 pF
MIN HARMONIC SEPARATION	-12 dBc	-10 dBc *
NOISE POWER DENSITY	-14 dBm/MHz	-10 dBm/MHz
PRIME POWER	621 W	750 W
TEMPERATURE RANGE	-40° to 85 °C	—

RF PERFORMANCE			
FREQ GHz	TYP SAT POWER OUTPUT (WATTS)	MIN SPEC POWER OUTPUT (WATTS)	TYP GAIN AT SPEC POWER dB
8.8	8510	8200	50
8.9	8700	8600	50
9.0	8700	8700 *	51
9.2	8800	8700	51
9.4	8900	8700	51
9.6	8900	8700	51
9.8	8900	8700	51
10.0	8900	8700	51
10.1	8900	8700	51
10.2	8800	8700	51
10.3	8800	8700	51
10.4	8800	8700	51
10.5	8700	8500	50

TYPICAL POWER OUTPUT IS SHOWN TO ILLUSTRATE CAPABILITY.

GAIN IS W/O EQUALIZER.
 HIGHER GAIN IS AVAILABLE WITH SSA.

An ISO 9001:2000 Quality System
 Certified Company

12/08