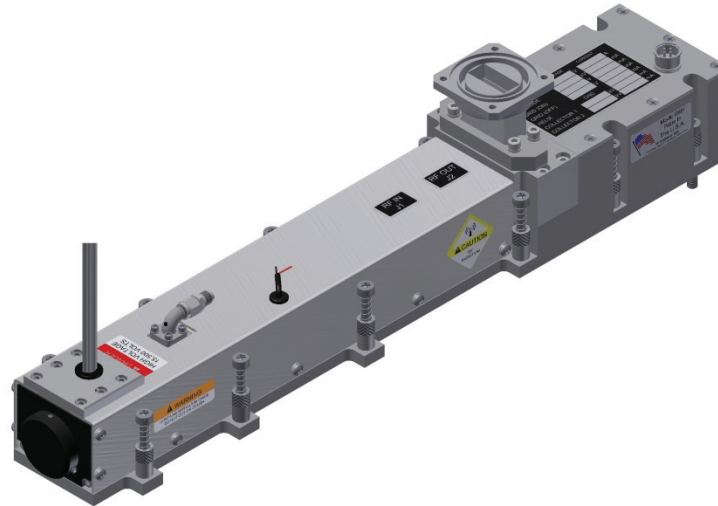


# MTI 3948B

## Pulse TWT

### 8.8 GHz – 10.5 GHz

- 5% Maximum Duty
- 7400 W Minimum Power
- 8.8 to 10.5 GHz
- -54° to 85° C
- 1179 W Typ. Prime Power @5%
- 48-51 dB Typical Gain
- 15.45" L x 2.77" W x 3.25" H  
(39.2 x 7 x 8.27 cm)
- ±15° Phase Match



#### RF Performance

Freq (GHz)	Typ. Sat. Power Output (W)	Min. Spec. Power Output (W)	Typ. Gain @ Spec. Power (dB)
8.8	7400	6800	48
8.9	7800	7400	49
9.0	8300	8000	50
9.2	8350	8000	50
9.4	8400	8000	50
9.6	8500	8000	50
9.8	8600	8000	51
10.0	8700	8000	51
10.1	8700	8000	51
10.2	8700	8000	51
10.3	8300	7800	50
10.4	8200	7500	50
10.5	8200	7500	49

Typical power output is shown to illustrate capability.  
Typical gain shown is without equalizer.

#### Typical Operating Conditions

Element	Typical Operating Conditions		Power Supply Requirements		
	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					
with RF	Ground	400 mApk	Ground	Ground	500 mApk @ 5%
without RF	Ground	75 mApk	Ground	Ground	460 mApk @ 5%
Grid On	250 Vpk	0	100 Vpk	300 Vpk	30 mApk
Grid Off	-300 Vdc	0	-300 Vdc	-500 Vdc	0.5 mA
Cathode (Ek)	-14.2 kV	2.3 Apk	-14 kV	-15 kV	2.5 Apk
Collector w/RF					
Coll. #1	11.7 kV	0.4 Apk	80% x Ek ±2%		1 Apk
Coll. #2	8.5 kV	1.5 Apk	58% x Ek ±2%		2.5 Apk

Cathode voltage is measured with respect to ground.  
Heater, Collector, and Grid voltages are measured with respect to Cathode.

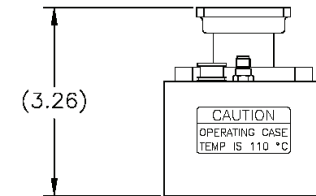
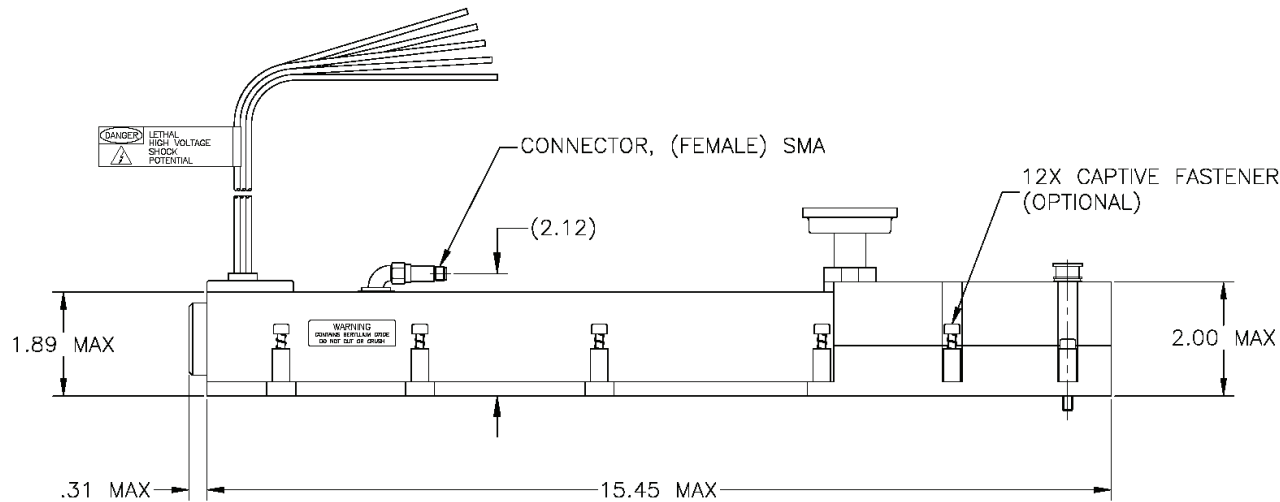
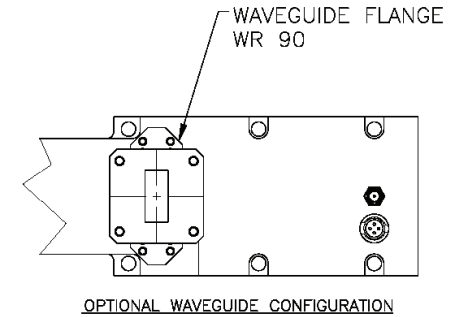
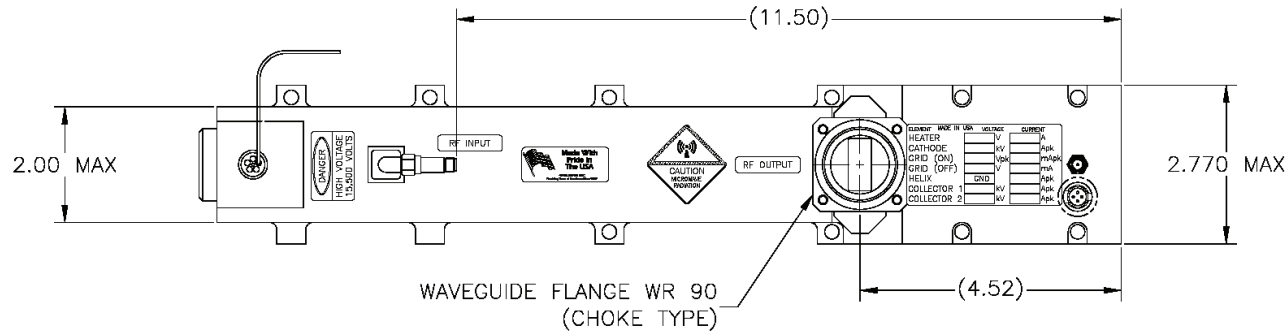
#### Performance

	Typical	Spec
Input VSWR.....	1.5:1	2.0:1
Output VSWR.....	1.5:1	1.8:1
Max. Duty .....	—	5%
Max. Pulsewidth .....	—	50 μs
Min. Harmonic Separation.....	-12 dBc	-10 dBc
Noise Power Density (dBm/MHz) .....	-14	-10
Prime Power.....	1179 W	1300 W

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, transshipped 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.

NOTES:

1. THERMOSTAT OPTIONS: N/C OR N/O



SUBJECT TO CHANGE W/O NOTICE ISO 9001:2008 Registered

<p>TELEDYNE MICROWAVE SOLUTIONS  <b>TWT Products</b>          11361 Sunrise Park Dr., Rancho Cordova, CA (916) 638-3344</p>
TITLE
MTI 3948B

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