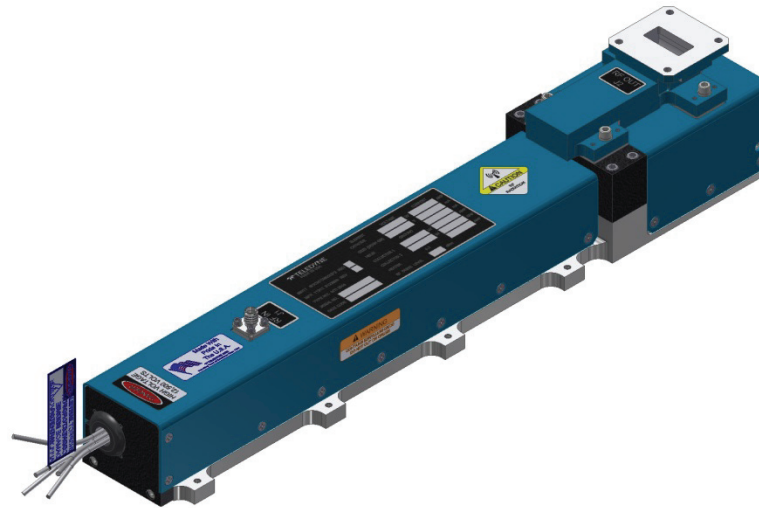


# MTI 3048D

## Pulse TWT

### 8.7 GHz – 10.5 GHz

- 10% Maximum Duty
- 3 kW Minimum Power
- 8.7 to 10.5 GHz
- -40° to 85° C
- 1270 W Typ. Prime Power @10%
- 45-47 dB Typical Gain
- 15.0" L x 2.75" W x 2.8" H  
(38.1 x 7.0 x 7.1 cm)



#### RF Performance

Freq (GHz)	Typ. Sat. Power Output (W)	Min. Spec. Power Output (W)	Typ. Gain @ Spec. Power (dB)
8.7	3700	3500	46
8.8	3800	3500	46
8.9	3900	3600	46
9.0	4000	3600*	46
9.2	4000	3800	46
9.4	4100	4000	46
9.6	4100	4000	47
9.8	4200	4000	47
10.0	4200	4000	47
10.1	4100	3800	47
10.2	4000	3700	47
10.3	3800	3600	46
10.4	3600	3200	46
10.5	3400	3000	45

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

Typical Operating Conditions Element	Voltage	Current	Power Supply Requirements		
			Voltage Min.	Voltage Max.	Current Max.
Heater	-6.3 Vdc	1.7 A	-6.1 Vdc	-6.5 Vdc	2.5 A
Helix					
with RF	Ground	300 mApk	Ground	Ground	230 mApk @ 10%**
without RF	Ground	70 mApk	Ground	Ground	75 mApk @ 10%
Grid On	200 Vpk	2 mApk	110 Vpk	300 Vpk	150 mApk
Grid Off	-200 Vdc	0	-150 Vdc	-230 Vdc	0.5 mA
Cathode (Ek)	-11.9 kV	1.6 Apk	-11 kV	-13 kV	2 Apk
Collector w/RF					
Coll. #1	7.8 kV	0.9 Apk	65% x Ek ±5%		1.2 Apk
Coll. #2	5 kV	0.4 Apk	42% x Ek ±2%		2 Apk

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

*\*\* May not exceed 23 mA avg. at any duty.*

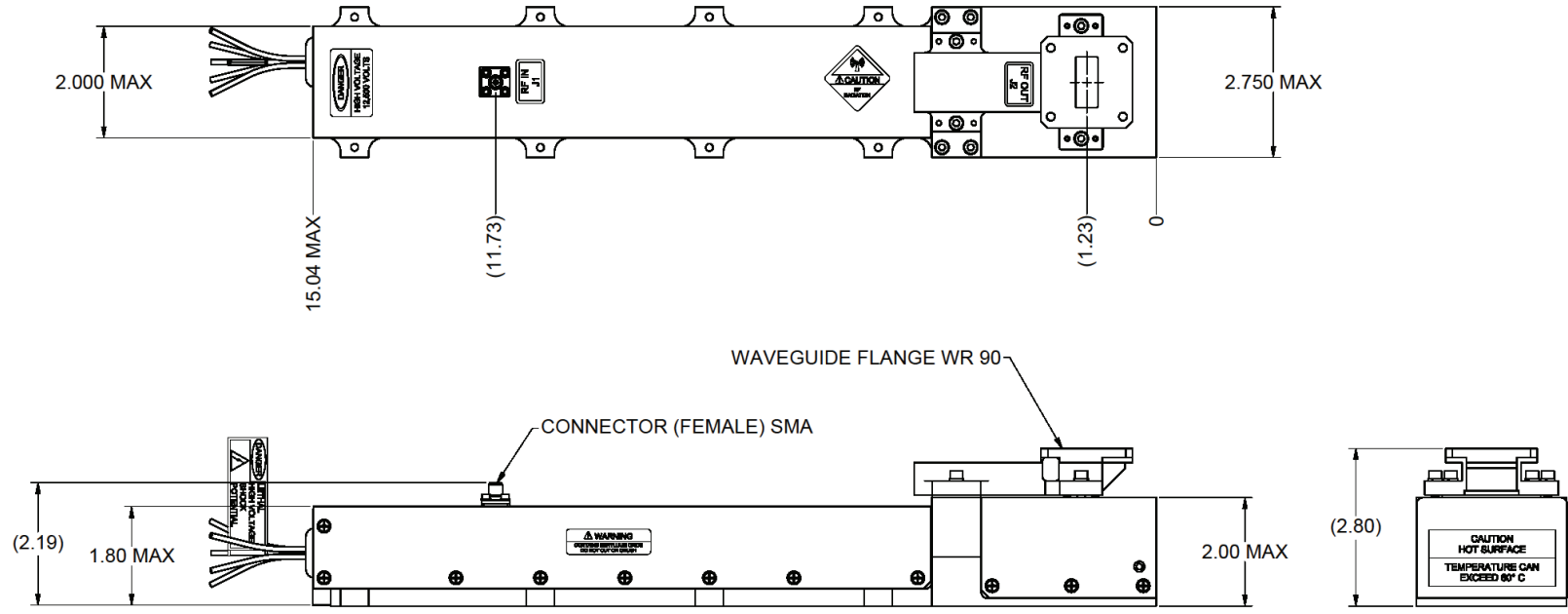
Performance	Typical	Spec
Input VSWR.....	1.8:1	2.0:1
Output VSWR.....	1.8:1	2.0:1
Max. Duty .....	—	10%
Max. Pulsewidth .....	—	100 μs
Grid Capacitance.....	49 pF	55 pF
Min. Harmonic Separation.....	-16 dBc	-10 dBc*
Noise Power Density (dBm/MHz) .....	-15	-10
Prime Power.....	1270 W	1400 W

*\* Minimum harmonic separation applies to the minimum specified power output at the indicated frequency.*

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

TELEDYNE MICROWAVE SOLUTIONS <b>TWT PRODUCTS</b> <small>11361 Sunrise Park Dr., Rancho Cordova, CA (916) 638-3344</small>
TITLE
MTI 3048D

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