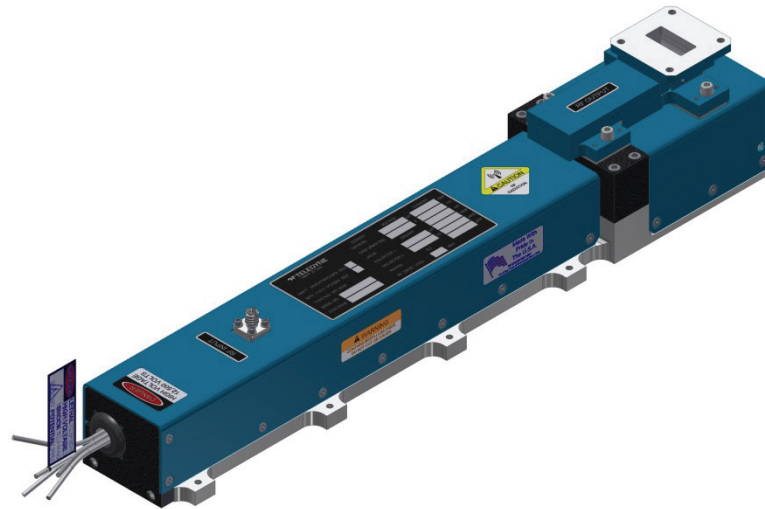


# MTI 3048Q

## Pulse TWT

### 8.2 GHz – 12.4 GHz

- 8% Maximum Duty
- 2500 W Minimum Power
- 8.2 to 12.4 GHz
- -40° to 85° C
- 1020 W Typ. Prime Power @8%
- 43-50 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)
8.2	2600	2500*	45
8.5	3500	3000	47
9.0	4000	3000	50
10.0	4300	3000	50
11.0	4180	3000	48
12.4	3020	3000	43

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	1.7 A	-6.1 Vdc	-6.5 Vdc	2.5 A
Helix					
with RF	Ground	300 mApk	Ground	Ground	550 mApk @ 8%
without RF	Ground	70 mApk	Ground	Ground	450 mApk @ 8%
Grid On	200 Vpk	2.5 mApk	110 Vpk	300 Vpk	150 mApk
Grid Off	-200 Vdc	0	-150 Vdc	-230 Vdc	0.5 mA
Cathode (Ek)	-12 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.

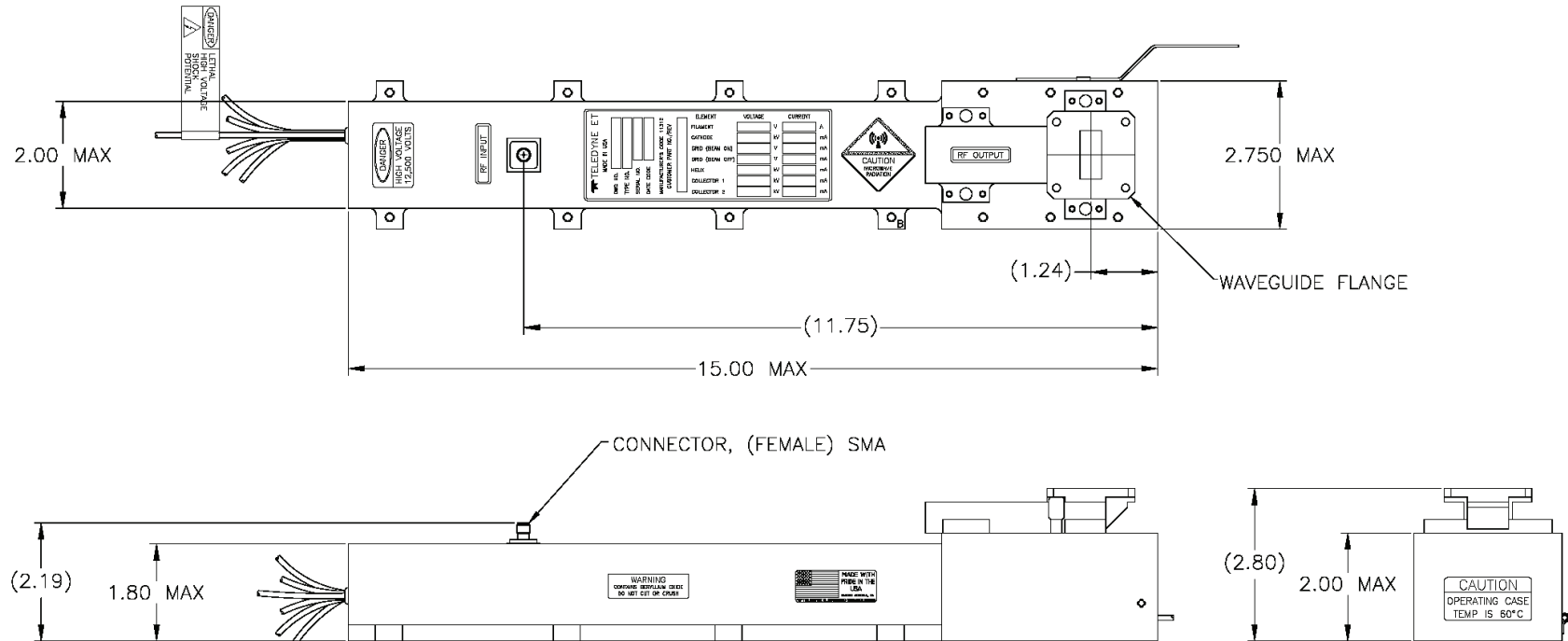
Performance	Typical	Spec
Input VSWR.....	2.3:1	2.5:1
Output VSWR.....	2.0:1	2.5:1
Max. Duty .....	—	8%
Max. Pulsewidth .....	—	100 μs
Grid Capacitance.....	49 pF	55 pF
Min. Harmonic Separation.....	-10 dBc	-8 dBc*
Noise Power Density (dBm/MHz) .....	-15	-10
Prime Power.....	1020 W	1300 W

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

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NOTES:

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



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

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

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