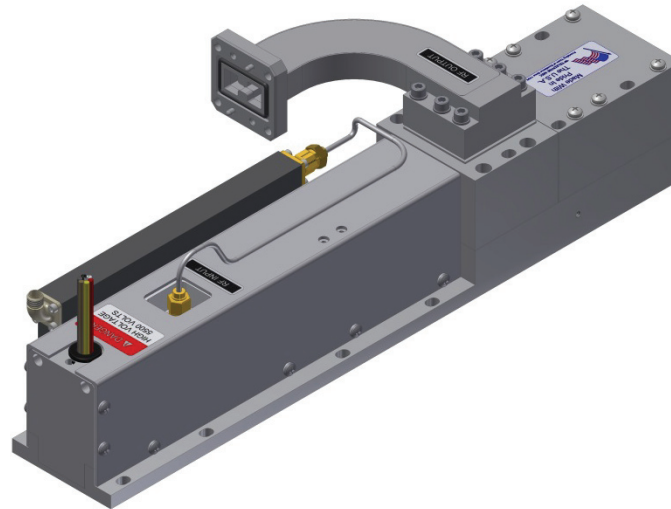


# MEC 5599

## Communication TWT

### Tri-Band

- 91 W Minimum Power
- Tri-Band
- -40° to 85° C
- 640 W Typ. Prime Power
- 41/41/40 dB Typical Gain
- 12" L x 2.1" W x 2.8" H (30.6 x 5.33 x 7.1 cm)
- Phase Match Available



Typical Operating Conditions Element	Voltage	Current	Power Supply Requirements		
			Voltage Min.	Voltage Max.	Current Max.
Heater	-6.0 Vdc	1.3 A	-5.9 Vdc	-6.7 Vdc	1.5 A
Helix with RF	Ground	15 mA	Ground	Ground	22 mA
without RF	Ground	5 mA	Ground	Ground	22 mA
FE On	-6 Vdc	0.1 mA	0	-10 Vdc	1 mA
FE Off	-1400 Vdc	0.5 mA	-1400 Vdc	-1600 Vdc	1 mA
Cathode (E <sub>k</sub> )	-5.0 kV	220 mA	-4.6 kV	-5.5 kV	220 mA
Collector w/RF					
Coll. #1	4.0 kV	65 mA	80% x E <sub>k</sub> ±2%		100 mA
Coll. #2	2.0 kV	140 mA	40% x E <sub>k</sub> ±2%		220 mA

Cathode voltage is measured with respect to ground.

Heater, Collector, and Focus Electrode (FE) voltages are measured with respect to Cathode.

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

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#### RF Performance

Freq (GHz)	Typ. Sat. Power Output (W)	Min. Spec. Power Output (W)	Typ. Gain @ Spec. Power (dB)
5.850	130	112*	41
6.000	140	112	41
6.425	160	112	41
-----			
7.900	199	158**	41
8.200	190	158	41
8.400	181	158	41
-----			
14.000	95	91***	40
14.250	95	91	40
14.500	100	91	40

Typical power output is shown to illustrate capability.

Typical gain shown is with equalizer.

Requires independent (E<sub>k</sub>) in each band.

#### Spectral Regrowth

Freq (GHz)	Min. Linear Power (W)	Modulation	Level @1 Symbol Rate
5.85	42	QPSK	-26 dBc
6.425	50	QPSK	-26 dBc
-----			
7.9	43	QPSK	-30 dBc
8.4	32	QPSK	-30 dBc
-----			
13.75	45	QPSK	-26 dBc
14.5	44	QPSK	-26 dBc

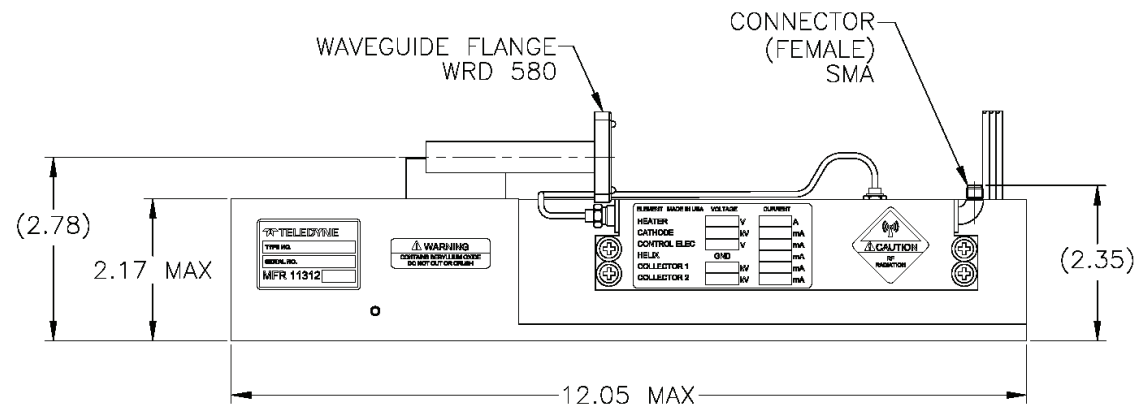
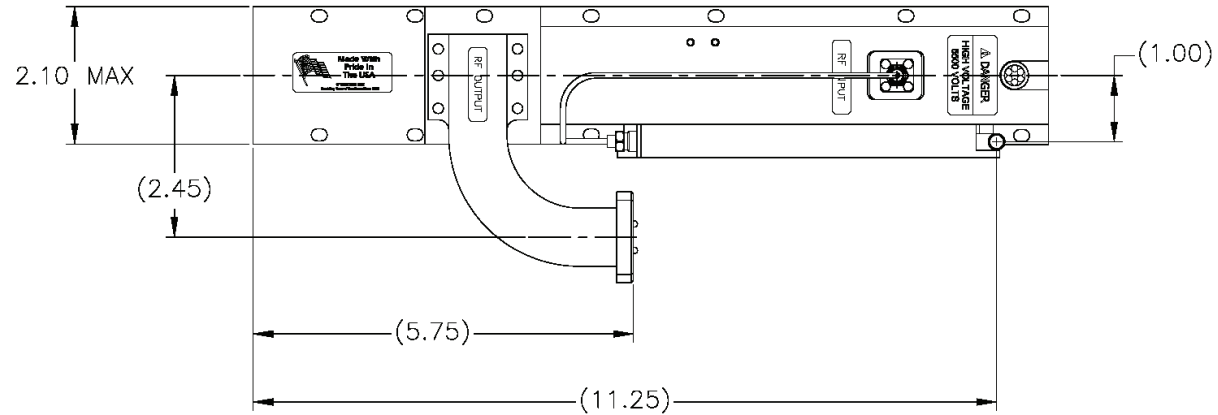
Performance	Typical	Spec
Input VSWR.....	2.95:1	3.0:1
Output VSWR.....	2.1:1	2.3:1
Max. Duty .....	—	CW
FE Capacitance .....	46 pF	65 pF
Min. Harmonic Separation (dBc) ...	-5/-10/-20	-3*/-8**/-12***
Noise Power Density (dBm/MHz) .....	-19	-17
Prime Power .....	640 W	660 W

Specifications are subject to change without notice.

Teledyne TWT Products • 11361 Sunrise Park Drive • Rancho Cordova, CA 95742 • 916.638.3344 • www.teledynemicrowave.com

NOTES:

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



TELEDYNE MICROWAVE SOLUTIONS  
TWT Products  
11361 Sunrise Park Dr., Rancho Cordova, CA 95742 916.638.3344

TITLE

MEC 5599

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ISO 9001:2008 Registered

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