

# MEC 5441/MEC 5442

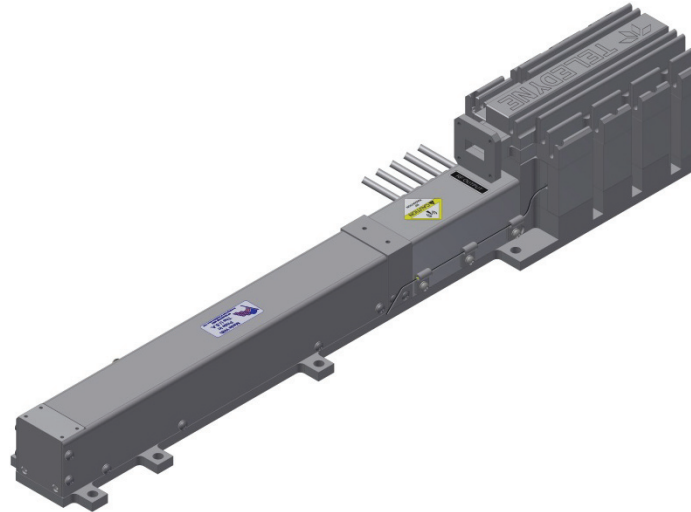
## Communication TWT

### Ku/DBS Band

- 300 W Minimum Power
- Ku/DBS Band
- -40° to 85° C
- 1299 W Typ. Prime Power
- 43-51 dB Typical Gain
- 19.8" L x 3" W x 3.4" H  
(50.34 x 7.67 x 8.64 cm)
- Phase Match Available

5441 – Grid

5442 – Focus Electrode (FE)



#### Typical Operating Conditions

Element	Voltage	Current	Power Supply Requirements		
			Voltage Min.	Voltage Max.	Current Max.
Heater (MEC 5441)	-6.1 Vdc	1.6 A	-5.8 Vdc	-6.6 Vdc	2.5 A
Heater (MEC 5442)	-6.1 Vdc	1.6 A	-5.6 Vdc	-6.6 Vdc	2.0 A
Helix					
with RF	Ground	2.3 mA	Ground	Ground	10 mA
without RF	Ground	1.0 mA	Ground	Ground	10 mA
FE On	-25 Vdc	0.3 mA	0	-75 Vdc	1 mA
FE Off	-1300 Vdc	0.02 mA	-1300 Vdc	-1500 Vdc	1 mA
Grid On	174 Vdc	0.5 mA	125 Vdc	250 Vdc	5 mA
Grid Off	-250 Vdc	0.5 mA	-250 Vdc	-500 Vdc	1 mA
Cathode (E <sub>k</sub> )	-10.2 kV	295 mA	-10 kV	-10.8 kV	300 mA
Coll. #1 w/RF	5.71 kV	38 mA	56% x E <sub>k</sub> ±2%		100 mA
Coll. #2 w/RF	4.08 kV	255 mA	40% x E <sub>k</sub> ±2%		300 mA

Cathode voltage is measured with respect to ground.

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

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#### RF Performance

Freq (GHz)	Typ. Sat. Power Output (W)	Min. Spec. Power Output (W)	Typ. Gain @ Spec. Power (dB)
14.0	400	350*	51
14.1	400	350	51
14.2	400	350	51
14.3	400	350	51
14.4	400	350	50
14.5	400	350	50
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17.3	400	300	46
17.4	400	300	46
17.5	400	300	46
17.6	400	300	46
17.7	400	300	46
17.8	400	300	46
17.9	390	300	45
18.0	380	300	45
18.1	360	300	44
18.2	355	300	43
18.3	340	300	43
18.4	330	300	43

Typical power output is shown to illustrate capability.

Typical gain shown is without equalizer.

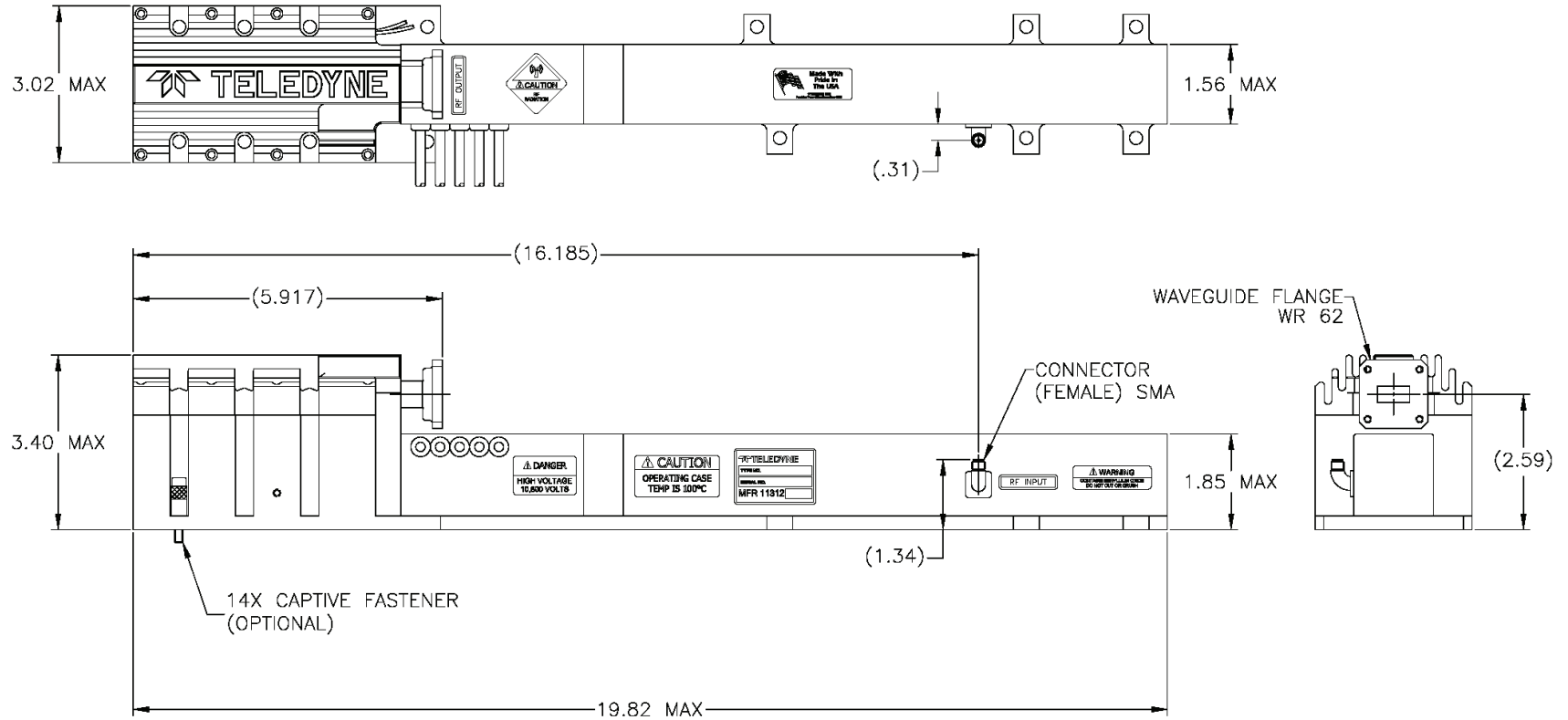
\* Minimum harmonic separation applies to the minimum specified power output at the indicated frequency.

Performance	Typical	Spec
Input VSWR.....	1.7:1	2.5:1
Output VSWR.....	2:1	2.5:1
Max. Duty .....	—	CW
FE Capacitance.....	50 pF	65 pF
Grid Capacitance.....	37 pF	50 pF
Min. Harmonic Separation.....	-30 dBc	-15* dBc
Noise Power Density (dBm/MHz) .....	-13.9	-5
Prime Power.....	1299 W	1400 W

Specifications are subject to change without notice.

NOTES:

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



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

<p><b>TELEDYNE MICROWAVE SOLUTIONS</b>  <b>TWT Products</b>          11361 Sunrise Park Dr., Rancho Cordova, CA (916) 638-3344</p>
<p>TITLE          MEC 5441/MEC 5442</p>

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