

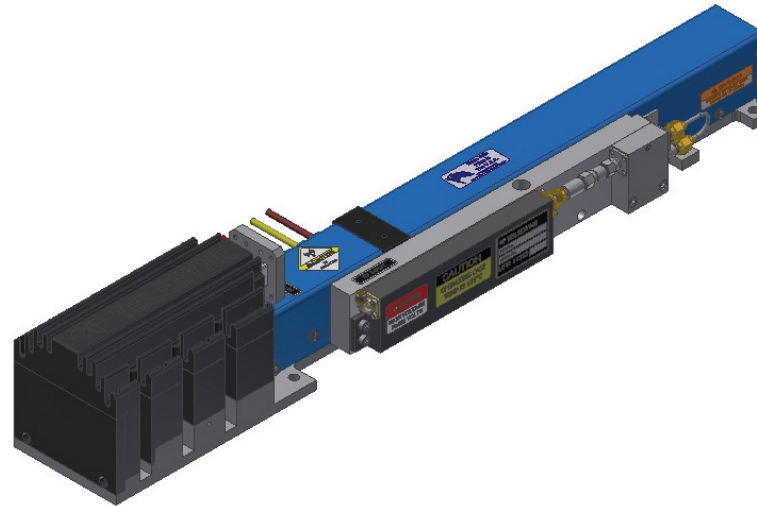
MEC 5421/MEC 5422

Continuous Wave TWT

6.5 GHz – 18.0 GHz

- 250 W Minimum Power
- 6.5 to 18.0 GHz
- -40° to 85° C
- 1147 W Typ. Prime Power
- 35-45 dB Typical Gain
- 19.8" L x 3.47" W x 3.4" H (50.3 x 8.8 x 8.64 cm)
- ±20° Phase Match

5421 – Grid
5422 – Focus Electrode (FE)



Typical Operating Conditions Element	Voltage	Current	Power Supply Requirements		
			Voltage Min.	Voltage Max.	Current Max.
Heater	-6.3 Vdc	1.6 A	-6.0 Vdc	-6.6 Vdc	2 A
Helix					
with RF	Ground	8 mA	Ground	Ground	15 mA
without RF	Ground	2 mA	Ground	Ground	15 mA
FE On	-25 Vdc	0.1 mA	0	-75 Vdc	1 mA
FE Off	-1300 Vdc	0.1 mA	-1500 Vdc	-1700 Vdc	1 mA
Grid On	200 Vdc	1 mA	125 Vdc	250 Vdc	10 mA
Grid Off	-200 Vdc	0.1 mA	-200 Vdc	-500 Vdc	1 mA
Cathode (E _k)	-10.3 kV	270 mA	-10 kV	-10.5 kV	300 mA
Collector w/RF					
Coll. #1	5.36 kV	50 mA	52% x E _k ±2%		100 mA
Coll. #2	3.71 kV	212 mA	36% x E _k ±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.

RF Performance

Freq (GHz)	Typ. Sat. Power Output (W)	Min. Spec. Power Output (W)	Typ. Gain @ Spec. Power (dB)
6.5	275	250	35
7.0	275	250	38
8.0	290	250	41
9.0	280	250	43
10.0	275	250	45
11.0	280	250	45
12.0	300	250	45
13.0	300	250	45
14.0	300	250	45
15.0	300	250	43
16.0	285	250	41
17.0	275	250	38
18.0	275	250	35

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

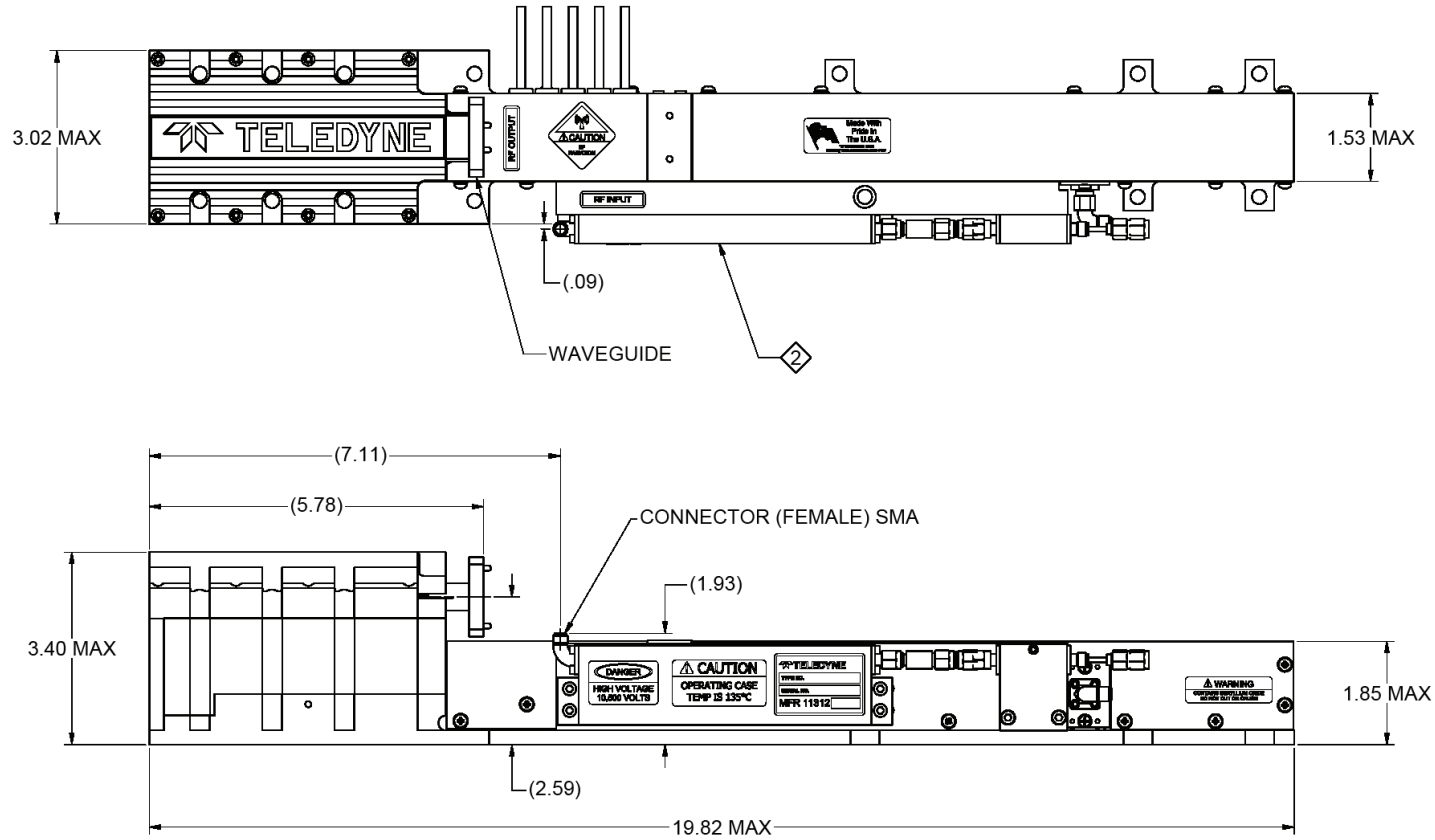
Performance	Typical	Spec
Input VSWR.....	2:1	2.5:1
Output VSWR.....	2:1	2.25:1
Max. Duty	—	CW
FE Capacitance.....	50 pF	65 pF
Grid Capacitance.....	37 pF	50 pF
Min. Harmonic Separation.....	-7 dBc	-5 dBc
Noise Power Density (dBm/MHz)	-15	-10
Prime Power.....	1147 W	1400 W

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

◊ EQUALIZER OPTIONAL BASED UPON CUSTOMER REQUIREMENT.



SUBJECT TO CHANGE W/O NOTICE

ISO 9001:2008 Registered

TELEDYNE MICROWAVE SOLUTIONS TWT PRODUCTS <small>11361 Sunrise Park Dr., Rancho Cordova, CA (916) 638-3344</small>	
TITLE	MEC 5405, MEC 5406, MEC 5407, MEC 5408, MEC 5409, MEC 5410, MEC 5411, MEC 5412, MEC 5413, MEC 5414, MEC 5415, MEC 5416, MEC 5419, MEC 5420, MEC 5421, MEC 5422, MEC 5423, MEC 5424

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