

MEC 5413/MEC 5414

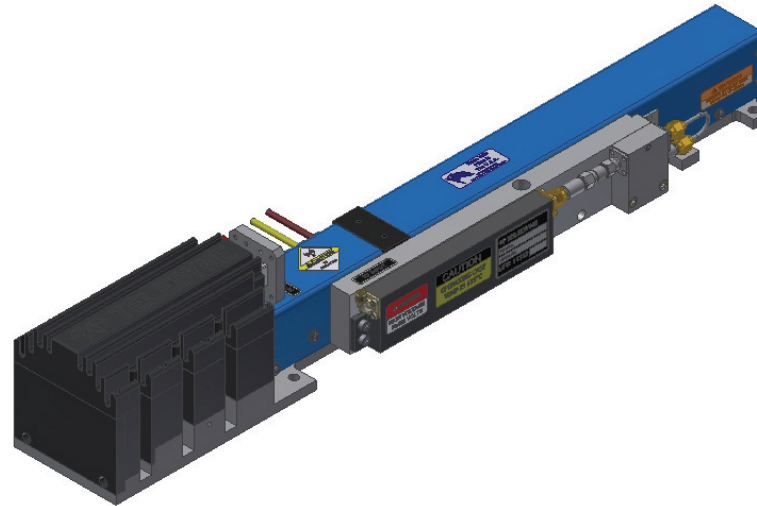
Continuous Wave TWT

6.0 GHz – 18.0 GHz

- 200 W Minimum Power
- 6.0 to 18.0 GHz
- -40° to 85° C
- 1132 W Typ. Prime Power
- 35-46 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

5413 – Grid

5414 – Focus Electrode (FE)



Typical Operating Conditions

Element	Typical Operating Conditions		Power Supply Requirements		
	Voltage	Current	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	7 mA	Ground	Ground	15 mA
without RF	Ground	1 mA	Ground	Ground	15 mA
FE On	-50 Vdc	0.1 mA	0	-75 Vdc	1 mA
FE Off	-1300 Vdc	0.1 mA	-1500 Vdc	-1700 Vdc	1 mA
Grid On	180 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	45 mA	52% x E _k ±2%		100 mA
Coll. #2	3.71 kV	218 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)
6.0	225	200	35
7.0	245	200	38
8.0	245	200	41
9.0	245	200	43
10.0	225	200	45
11.0	250	200	46
12.0	250	200	46
13.0	250	200	46
14.0	250	200	45
15.0	245	200	43
16.0	240	200	41
17.0	230	200	38
18.0	220	200	35

Typical power output is shown to illustrate capability.

Typical gain shown is without equalizer.

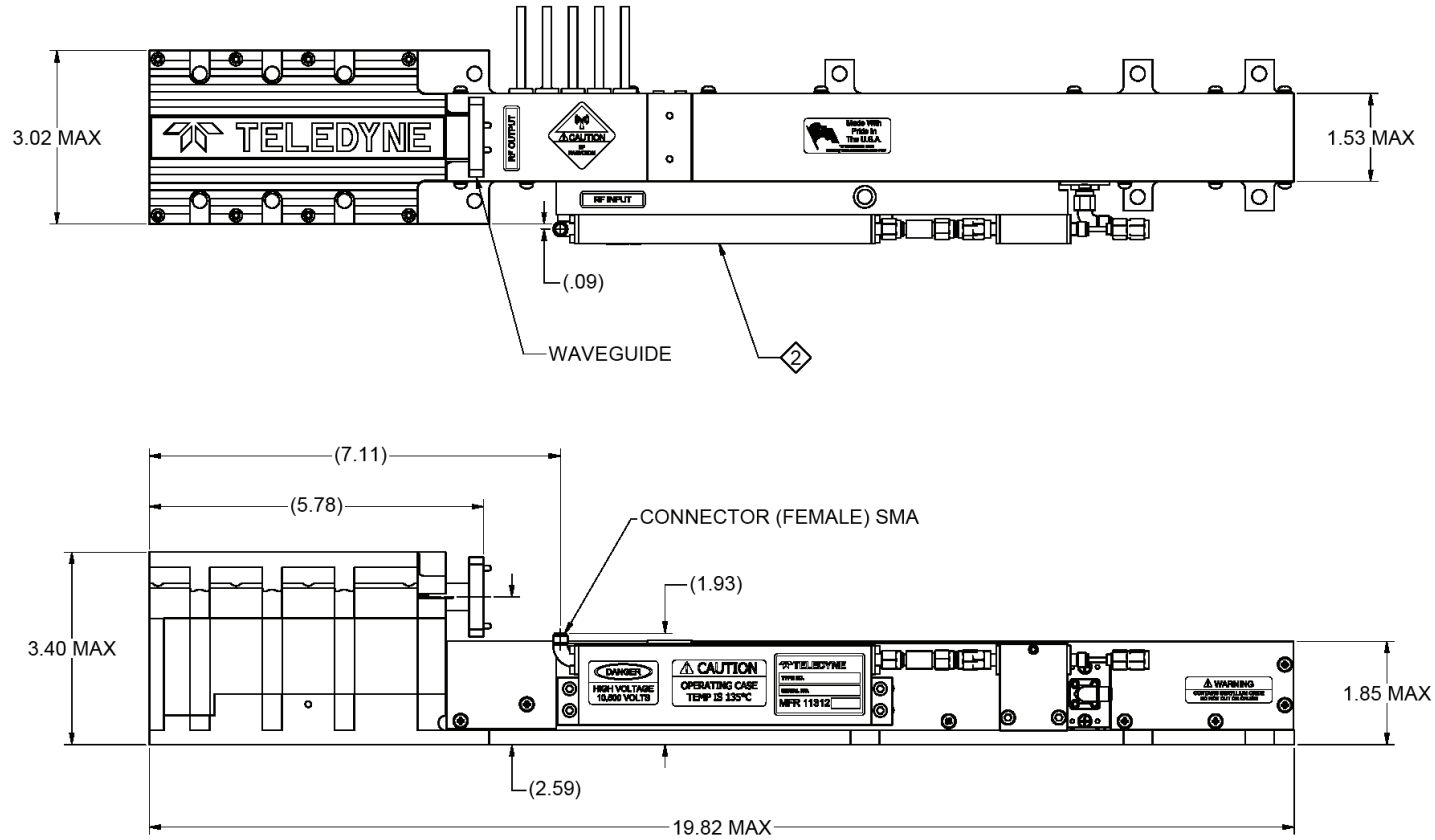
Performance	Typical	Spec
Input VSWR.....	2:1	2.5:1
Output VSWR.....	2:1	2.25:1
Max. Duty	—	CW
FE Capacitance.....	50 pF	65 pF
Grid Capacitance.....	37 pF	50 pF
Min. Harmonic Separation.....	-5.5 dBc	-5 dBc
Noise Power Density (dBm/MHz)	-15	-10
Prime Power.....	1132 W	1400 W

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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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