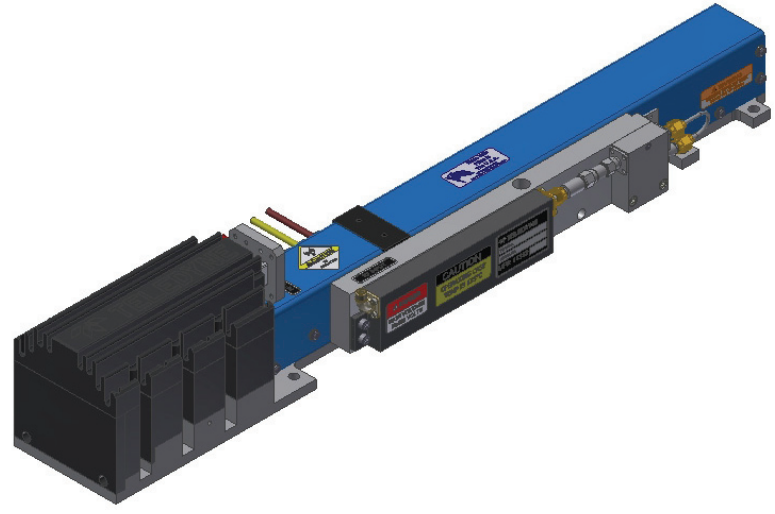
MEC 5419/MEC 5420

Continuous Wave TWT

7.5 GHz – 18.0 GHz

- 250 W Minimum Power
- 7.5 to 18.0 GHz
- -40° to 85° C
- 1083 W Typ. Prime Power
- 35-55 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

5419 – Grid
5420 – Focus Electrode (FE)



RF Performance

Freq (GHz)	Typ. Sat. Power Output (W)	Min. Spec. Power Output (W)	Typ. Gain @ Spec. Power (dB)
7.5	275	250	35
8.0	275	250	45
9.0	300	250	50
10.0	275	250	55
11.0	300	250	55
12.0	300	250	55
13.0	300	250	55
14.0	300	250	55
15.0	300	250	50
16.0	290	250	55
17.0	280	250	50
18.0	270	250	35

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

Typical Operating Conditions / Power Supply Requirements

Element	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	12 mA
without RF	Ground	1 mA	Ground	Ground	12 mA
FE On	-45 Vdc	0.1 mA	0	-75 Vdc	1 mA
FE Off	-1300 Vdc	0.1 mA	-1500 Vdc	-1700 Vdc	1 mA
Grid On	190 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)	-10.2 kV	260 mA	-10 kV	-10.5 kV	280 mA
Collector w/RF					
Coll. #1	5.36 kV	45 mA	52% x E_k ±2%		100 mA
Coll. #2	3.67 kV	208 mA	36% x E_k ±2%		280 mA

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

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	-8 dBc	-5 dBc
Noise Power Density (dBm/MHz)	-15	-10
Prime Power	1083 W	1250 W

TELEDYNE MICROWAVE SOLUTIONS
Everywhereyoulook™

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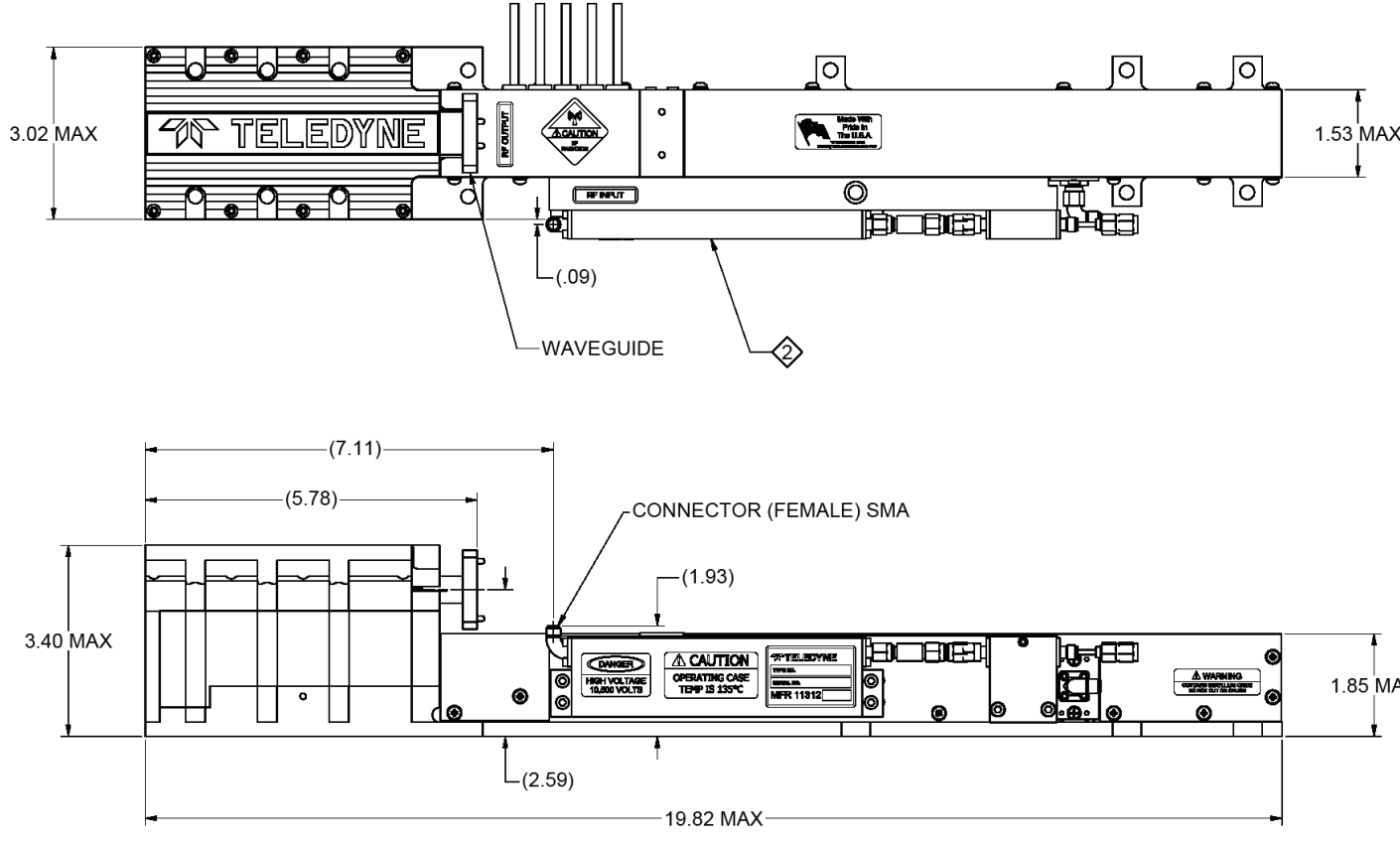
NOTES:

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

◇2◇ EQUALIZER OPTIONAL BASED UPON CUSTOMER REQUIREMENT.



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

TELEDYNE MICROWAVE SOLUTIONS
TWT PRODUCTS
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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