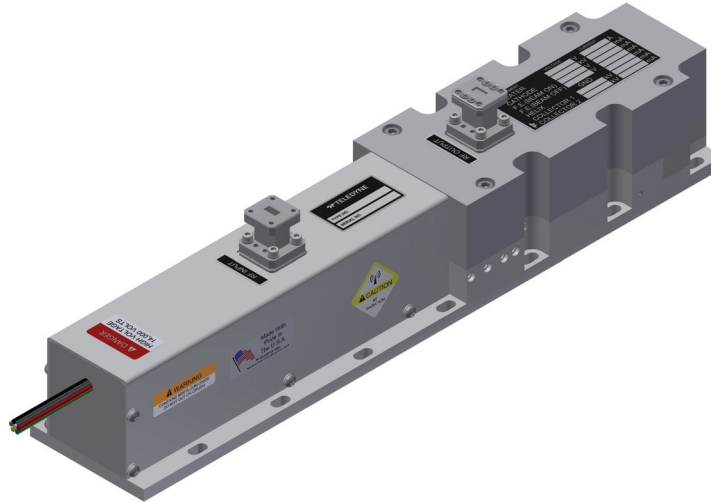


MEC 5530L

Dual Band Communication TWT

27 GHz – 30 GHz

- 502 W Peak Minimum Power
- 250 W CW Minimum Power
- 175 W Linear Minimum Power (Linearized)
- 27.0 GHz to 30.0 GHz
- -40° to 85° C
- 990 W Typ. Prime Power @ 53.5dBm
- 38 dB Typical Gain
- 14.1" L x 2.76" W x 3.15" H (36 x 7.0 x 8.0 cm)



Typical Operating Conditions			Power Supply Requirements		
Element	Voltage	Current	Voltage Min.	Voltage Max.	Current Max.
Heater	-6.3 Vdc	0.78A	-5.8 Vdc	-6.6 Vdc	1.5 A
Helix					
with RF	Ground	1.7 mA	Ground	Ground	4 mA
without RF	Ground	0.7 mA	Ground	Ground	4 mA
FE On	-18 Vdc	0.1 mA	0 Vdc	-40 Vdc	1 mA
FE Off	-1300 Vdc	0.1 mA	-1300 Vdc	-1400 Vdc	0.2 mA
Cathode (E _k)	-17.8 kV	185 mA	-17.2 kV	-18.2 kV	200 mA
Collector w/RF					
Coll. #1	8.53 kV	60.4 mA	49% x E _k ±2%		90 mA
Coll. #2	3.65 kV	116.3 mA	21% x E _k ±2%		185 mA

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

RF Performance

Freq (GHz)	Typ. CW. Power Output (W)	Min. Spec. Power Output (W)	Typ. Gain @ Spec. Power (dB)
27.0	250	250	38
27.5	250	250	37
28.0	250	250	39
28.5	250	250	40
29.0	250	250	38
29.5	250	250	37
30.0	250	250	39

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

Spectral Regrowth

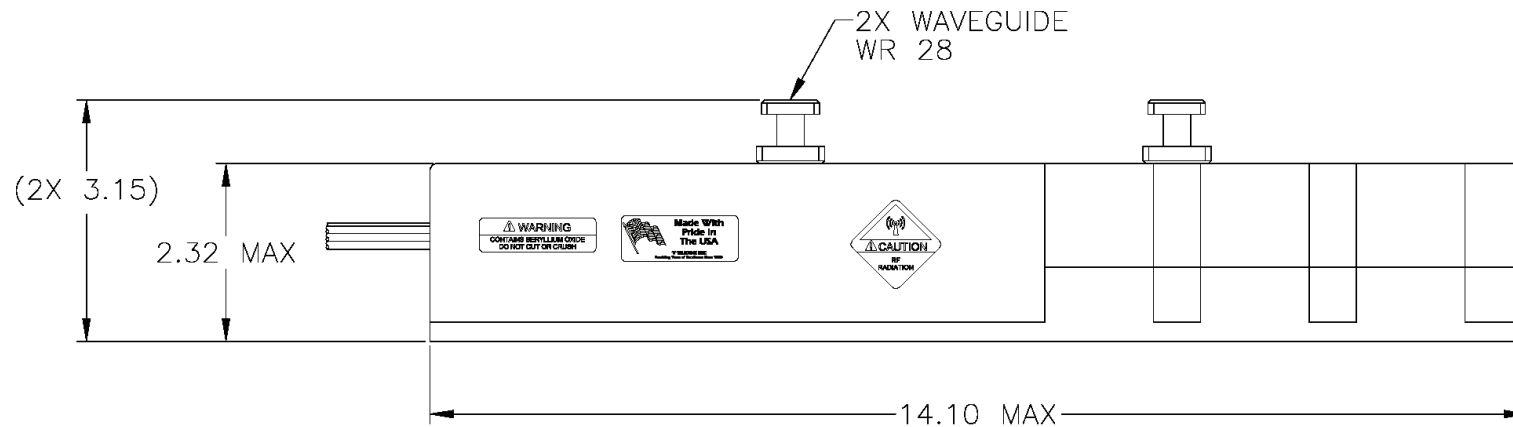
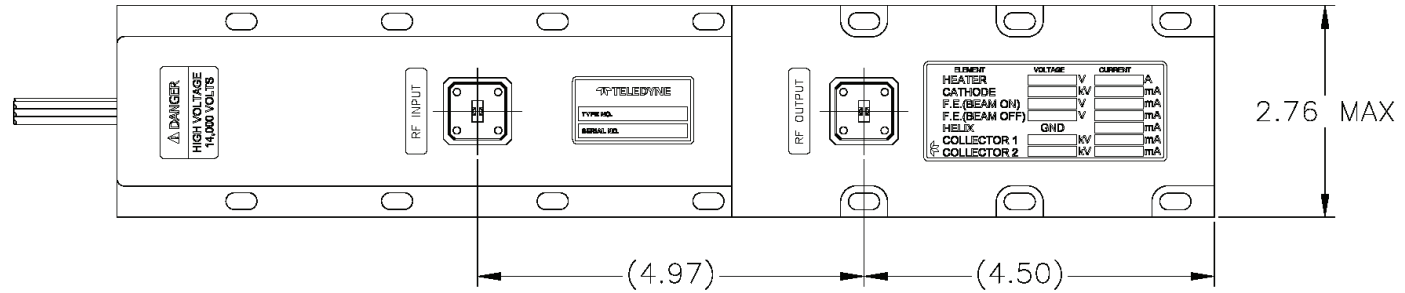
Freq (GHz)	Min. Linear Power (W)	Modulation	Level @1 Symbol Rate
27.0	175	QPSK	-30 dBc
27.5	175	QPSK	-30 dBc
28.0	175	QPSK	-30 dBc
28.5	175	QPSK	-30 dBc
29.0	175	QPSK	-30 dBc
29.5	175	QPSK	-30 dBc
30.0	175	QPSK	-30 dBc

Performance	Typical	Spec
Input VSWR.....	1.45:1	2.0:1
Output VSWR.....	1.50:1	2.0:1
Max. Duty	—	CW
FE Capacitance	50 pF	65 pF
Noise Power Density (dBm/MHz).....	-23	-20
Prime Power @ 53.5dBm	990 W	1100 W

This model number is subject to the jurisdiction of the U.S. Department of Commerce.

NOTES:

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



TELEDYNE MICROWAVE SOLUTIONS
TWT Products
 11361 Sunrise Park Dr., Rancho Cordova, CA (916) 638-3344

TITLE
 MEC 5530L/MEC 5530H

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

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