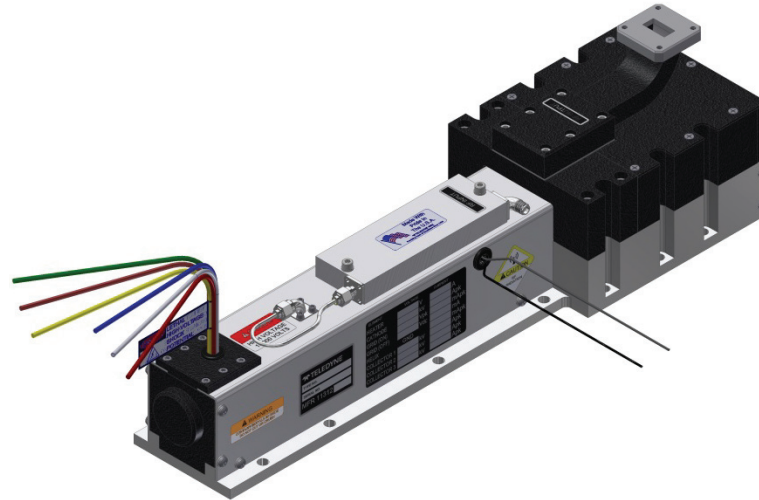


MEC 3104

Pulse TWT

12 GHz – 18 GHz

- 6% Maximum Duty
- 3470 W Minimum Power
- 12.0 to 18.0 GHz
- -40° to 85° C
- 1000 W Typ. Prime Power @6%
- 35-39 dB Typical Gain
- 14.7" L x 4" W x 4.17" H
(37.2 x 10.2 x 10.6 cm)
- Phase Match Available



RF Performance

| Freq (GHz) | Typ. Sat. Power Output (W) | Min. Spec. Power Output (W) | Typ. Gain @ Spec. Power (dB) |
|------------|----------------------------|-----------------------------|------------------------------|
| 12.0 | 3800 | 3470 | 35 |
| 13.0 | 4100 | 3470 | 35 |
| 14.0 | 4300 | 3470 | 37 |
| 15.0 | 4500 | 3470 | 39 |
| 16.0 | 4400 | 3470 | 37 |
| 17.0 | 4500 | 3470 | 35 |
| 18.0 | 3900 | 3470 | 35 |

Typical power output is shown to illustrate capability.
Typical gain shown is with equalizer.

| Typical Operating Conditions Element | Voltage | Current | Power Supply Requirements | | |
|---|----------|---------------------------------------|---------------------------|--------------|---------------|
| | | | Voltage Min. | Voltage Max. | Current Max. |
| Heater | -6.3 Vdc | 2.2 A | -6.1 Vdc | -6.5 Vdc | 2.75 A |
| Helix | | | | | |
| with RF | Ground | 375 mApk | Ground | Ground | 700 mApk @ 6% |
| without RF | Ground | 139 mApk | Ground | Ground | 700 mApk @ 6% |
| Grid On | 176 Vpk | 2 mApk | 100 Vpk | 300 Vpk | 30 mApk |
| Grid Off | -300 Vdc | 0.5 mA | -200 Vdc | -500 Vdc | 1.0 mA |
| Cathode (Ek) | -14.0 kV | 1.92 A | -13.4 kV | -15.4 kV | 2.0 Apk |
| Collector | | | | | |
| Coll. #1 | 10.4 kV | 259 mApk (w/RF) 110 mApk (w/o RF) | 74% x Ek ±2% | | 410 mApk |
| Coll. #2 | 8.3 kV | 520 mApk (w/RF) 54 mApk (w/o RF) | 59% x Ek ±2% | | 700 mApk |
| Coll. #3 | 6.17 kV | 849 mApk (w/RF) 1620 mApk (w/o RF) | 44% x Ek ±2% | | 1800 mApk |

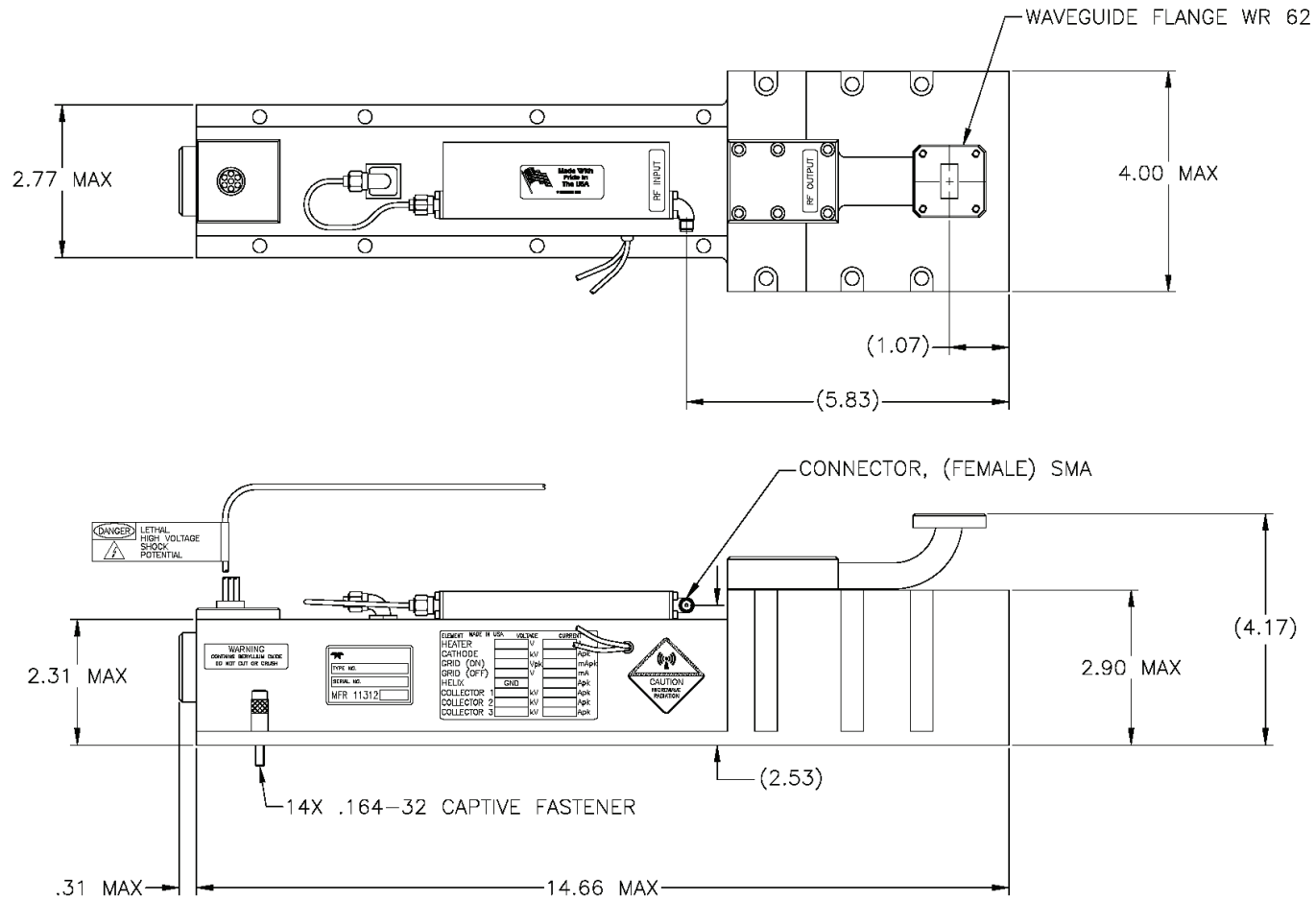
Cathode voltage is measured with respect to ground.
Heater, Collector, and Grid voltages are measured with respect to Cathode.

| Performance | Typical | Spec |
|--|---------|--------|
| Input VSWR..... | 2.0:1 | 2.5:1 |
| Output VSWR..... | 1.6:1 | 2.0:1 |
| Max. Duty | — | 6% |
| Max. Pulsewidth | — | 50 μs |
| Grid Capacitance..... | 58 pF | 60 pF |
| Noise Power Density (dBm/MHz) | -10 | 5 |
| Prime Power | 1000 W | 1800 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



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

TELEDYNE MICROWAVE SOLUTIONS
TWT Products
11361 Sunrise Park Dr., Rancho Cordova, CA 95742 (916) 638-3344

TITLE

MEC 3104

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