

V-Band, X2 Active Frequency Multiplier, 50 to 75 GHz, +20 dBm P_{out}

Description:

Model SFA-503753220-15KF-E1 is a V-Band active X2 frequency multiplier. The multiplier has an input frequency of 25.0 to 37.5 GHz with a typical input power of +3 dBm and an output frequency of 50 to 75 GHz with a typical output power of +20 dBm. The multiplier also has a typical harmonic suppression of -15 dBc. The DC power requirement for the multiplier is +8 V_{DC}/650 mA. The input port configuration is an K (F) connector and the output is a WR-15 waveguide with a UG-385/U anti-cocking flange. Other port configurations are available under different models.



Features:

- Full Band Coverage
- High Output Power
- Low Harmonic Emission

Applications:

- IEEE 802.11ab WiGig
- Frequency Extenders
- Source Modules
- Communication Systems

Electrical Specifications:

| Parameter | Minimum | Typical | Maximum |
|---------------------------|--------------------|--------------------|---------------------|
| Input Frequency | 25.0 GHz | | 37.5 GHz |
| Input Power | | +3 dBm | +20 dBm |
| Output Frequency | 50.0 GHz | | 75.0 GHz |
| Output Power | | +20 dBm | |
| Harmonic Suppression | | -15 dBc | |
| Spurious | | -60 dBc | |
| Port Return Loss | | 10 dB | |
| DC Voltage | +6 V _{DC} | +8 V _{DC} | +15 V _{DC} |
| DC Supply Current | | 650 mA | |
| Specification Temperature | | +25 °C | |
| Operating Temperature | 0 °C | | +50 °C |

Mechanical Specifications:

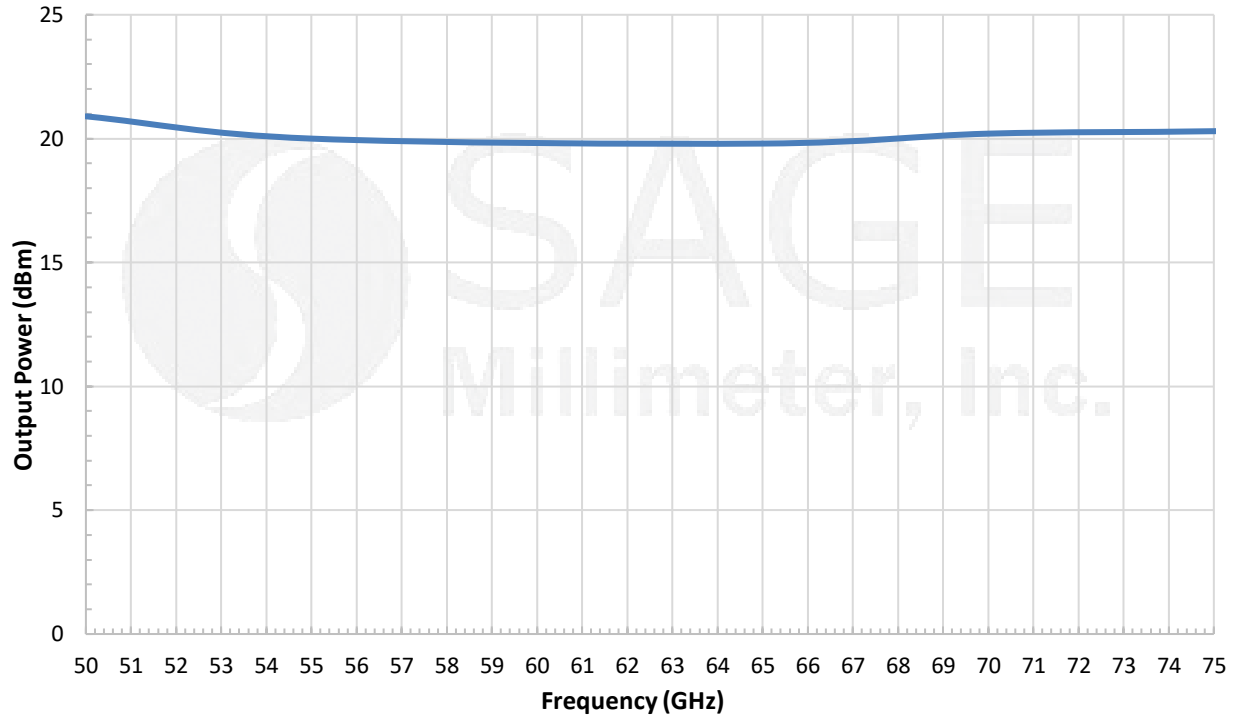
| Item | Specification |
|---------------|---|
| Input | K (F) |
| Output | WR-15 Waveguide with UG-385/U Anti-Cocking Flange |
| Bias | Solder Pin |
| Case Material | Aluminum |
| Finish | Gold Plated |
| Weight | 1.6 Oz |
| Size | 1.10" (W) x 1.80" (L) x 0.75" (H) |
| Outline | FA-SV-2CW-A-1.8 |



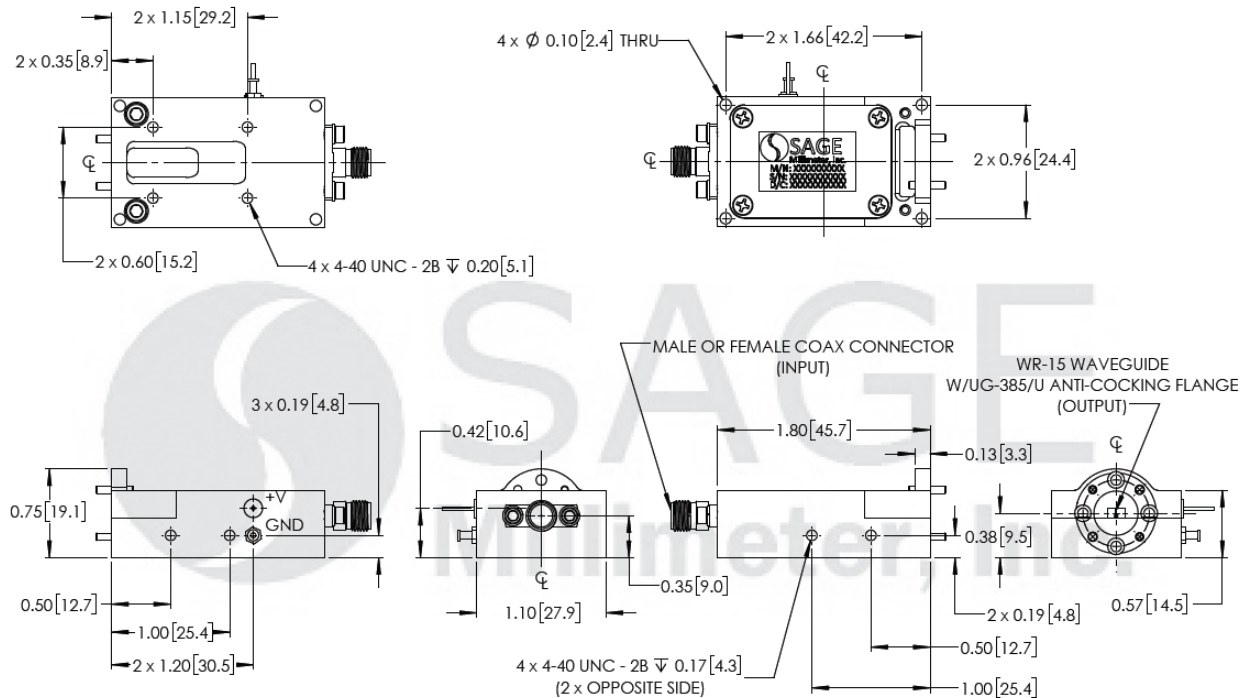
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Typical Output Power vs. Frequency

Bias: +8 V_{DC}/650 mA



Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])





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Note:

- All data presented is collected from a sample lot. Actual data may vary unit to unit, slightly.
- All testing was performed under +25 °C case temperature.
- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.
- Other mechanical configurations are available under different model numbers.

Caution:

- Exceeding absolute maximum ratings shown will damage the device.
- The device is static sensitive. Always follow ESD rules when working with the device.
- The case temperature of the device shall never exceed +50 °C. Use proper heatsink or fan if necessary.
- Any foreign objects in the waveguide will cause performance degradation and may damage the device.
- Proper torque, 8.0 ± 0.15 inch-pounds (0.90 ± 0.02 Nm), should be applied. **SAGE Millimeter torque wrench, model SCH-08008-S1, is highly recommended.**

