## SFP-06319-S1-M

## D-Band X3, Passive Frequency Multiplier

**SFP-06319-S1-M** is a D-Band, X3 passive multiplier that utilizes GaAs pHEMT-based MMIC chip with a balanced circuit configuration to generate third order harmonics with good harmonic and fundamental suppression. This multiplier requires an input frequency range of 36.7 to 56.7 GHz at +17 dBm RF power to yield 110 to 170 GHz at -5 dBm. The multiplier is equipped with WR-19 Uni-Guide waveguide connector as its input port and a WR-06 waveguide with a UG-387/U-M anti-cocking flange as its output port. Other interface configurations are offered under different model numbers.

## **Electrical Specifications:**

| Deremeter                 | N dia iron uno | Turning | Maxim    |
|---------------------------|----------------|---------|----------|
| Parameter                 | winimum        | Typical | Maximum  |
| Input Frequency           | 36.7 GHz       |         | 56.7 GHz |
| Output Frequency          | 110 GHz        |         | 170 GHz  |
| Input Power               | +16 dBm        | +17 dBm | +20 dBm  |
| Output Power              |                | -5 dBm  |          |
| Harmonic Suppression      |                | 20 dB   |          |
| Specification Temperature |                | +25°C   |          |
| Operating Temperature     | 0°C            |         | +50°C    |

## **Mechanical Specifications:**

| Item          | Specification  |
|---------------|--|
| Input Port    | WR-19 Uni-Guide™ Waveguides with UG-383/U-M Anti-<br>Cocking Flanges |
| Output Power  | WR-06 Waveguide with UG-387/U-M Anti-Cocking Flange                  |
| Case Material | Aluminum   |
| Finish        | Gold Plated  |
| Weight        | 1 Oz   |
| Size          | 1.14" (L) X 0.75" (W) X 0.75" (H)                                    |
| Outline       | FP-DU3-A-M   |



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## ECCN 3A001.b.7

#### FEATURES

- EATURES
- No External Bias
- Compact Design

### APPLICATIONS

- Source Modules
- Radar Systems

### SUPPLEMENTAL DETAILS



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## **Output Power vs. Frequency**

Input Power = +17 dBm



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



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#### NOTE:

- On condition that test data is provided it is collected from a sample lot. Actual data may vary slightly from unit to unit.
- All testing is performed under +25 °C room temperature.
- Eravant reserves the right to change the information presented without notice.

#### CAUTION:

- Exceeding absolute maximum ratings of the multiplier will damage the device.
- If a waveguide is present, any foreign objects in the waveguide will cause performance degradation and may damage or destroy the unit.
- The multiplier is a static sensitive device. Always follow ESD rules when working with the multiplier.

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