

## FEATURES

- ❖ High output power
- ❖ Full waveguide bandwidth
- ❖ Extends MW frequencies to MMW bands
- ❖ Output frequency up to 110 GHz

## APPLICATIONS

- ❖ Automatic test set
- ❖ Bench top test set
- ❖ Local oscillators
- ❖ Swept frequency sources



**SFE Series**

## DESCRIPTION

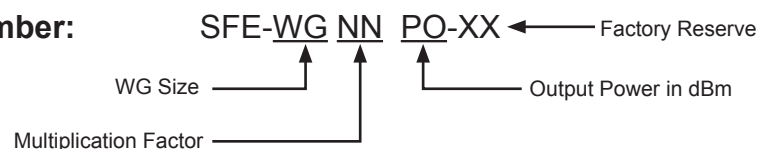
**SFE** series of frequency extenders combine high performance millimeterwave amplifiers, passive or active multipliers and filters to extend the low frequency sweepers, such as HP 83550B or Agilent 83751B, to extreme clean and low cost millimeterwave sources. The frequency extenders cover the output frequency range of 26.5 to 110 GHz in six waveguide bands. The typical input power for these standard units are rated at + 10.0 dBm while the output power up to 20 dBm is available. The SMA (F) coaxial connector is equipped for input and standard waveguide for output interface. The dimension of the standard products is measured as 4.20" (W) x 6.15" (L) x 2.68" (H).

## STANDARD PRODUCT SPECIFICATIONS

| Model Number      | Output Freq. (GHz) | Multiplying Factor | Input Freq. (GHz) | Output Power (dBm, Min) | Input Power (dBm, Typ.) | Output Waveguide | Bias (V/mA) |
|-------------------|--------------------|--------------------|-------------------|-------------------------|-------------------------|------------------|-------------|
| SFE-280208-01     | 26.5 - 40.0        | X 2                | 13.25 - 20.0      | 8.0                     | +3.0                    | WR-28            | +8 / 200    |
| SFE-280220-01     | 26.5 - 40.0        | X 2                | 13.25 - 20.0      | 20.0                    | +3.0                    | WR-28            | +8 / 600    |
| SFE-220305-01     | 33.0 - 50.0        | X 3                | 11.00-16.67       | 5.0                     | +3.0                    | WR-22            | +8 / 200    |
| SFE-190305-01     | 40.0 - 60.0        | X 3                | 13.33 - 20.0      | 5.0                     | +3.0                    | WR-19            | +8 / 200    |
| SFE-150405-01     | 50.0 - 75.0        | X 4                | 12.5 - 18.75      | 3.0                     | +3.0                    | WR-15            | +8 / 600    |
| SFE-120600-01     | 60.0 - 90.0        | X 6                | 10.00 - 15.00     | 0.0                     | +3.0                    | WR-12            | +8 / 600    |
| SFE-100600-01     | 75.0 - 110.0       | X 6                | 12.50 - 18.33     | -3.0                    | +3.0                    | WR-10            | +8 / 600    |
| Temperature Range |                    |                    |                   | 0 to +50°C              |                         |                  |             |

## CUSTOM ORDER

**Specify Model Number:**



Example: To order a Quadriplier with WR-15 waveguide with 15 dBm output power, specify SFE-150415-XX.