

# Frequency Doubler

High Isolation, In-line Output

# Model FD34SM-1

Input 5 to 2800 MHz  
Output 10 to 5600 MHz

## Electrical Specifications:<sup>(1)</sup>

| Parameter                                  | Conditions  |              | Specifications |         |         |
|--|-------------|--------------|----------------|---------|---------|
|  | Input (MHz) | Output (MHz) | Min            | Typical | Max     |
| Insertion Loss: <sup>(2)</sup>             | 5-2000      | 10-4000      |                | 11.5 dB | 13.0 dB |
|  | 2000-2800   | 4000-5600    |                | 12.3 dB | 14.0 dB |
| Fundamental Isolation: <sup>(3)</sup>      | 5-500       | 10-1000      | 25 dB          | 35 dB   |         |
|  | 500-2000    | 1000-4000    | 30 dB          | 40 dB   |         |
|  | 2000-2800   | 4000-5600    | 25 dB          | 35 dB   |         |
| Third Harmonic Suppression: <sup>(4)</sup> | 5-2800      | 10-5600      | 20 dBc         | 33 dBc  |         |
| Input VSWR:                                | 5-500       | 10-1000      |                | 1.5:1   |         |
|  | 500-2000    | 1000-4000    |                | 1.7:1   |         |
|  | 2000-2800   | 4000-5600    |                | 1.5:1   |         |
| Input Power:                               | 5-2800      | 10-5600      |                | +11 dBm |         |

**Notes:**

- Specifications are guaranteed when tested as a doubler in a 50 Ohm system at +25°C with nominal input power. Specifications indicated as typical are not guaranteed.
- Insertion loss typically degrades less than 0.5 dB at +100°C and improves less than 0.5 dB at -55°C.
- Fundamental isolation is referenced to the fundamental input.
- Third Harmonic Suppression is referenced to the second harmonic output.

