

Point Contact Diodes: 1N Series**S - X Band Point Contact Mixer Diodes****Description**

This **MicroMetrics** 1N series of Point Contact Mixer diodes is designed for applications from S-Band through X-Band. Each device in this series is in a cartridge package specially designed for low noise figure performance. These diodes employ epitaxial silicon optimized for low noise figure and wide bandwidth and are used in single or multiple device mixer applications.

Applications

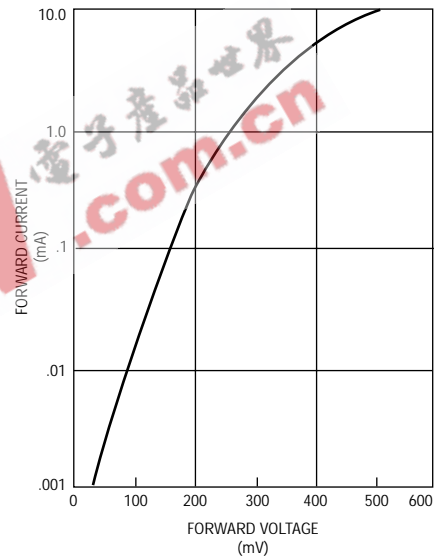
This 1N series of Point Contact Mixers is suitable for use in waveguide, coaxial and stripline applications.

Features

- Mechanical Reliability
- Low Noise Figure
- Wide Bandwidth

Packaging

- Cartridge Style

Typical Performance

Point Contact Diodes: 1N Series

Electrical Characteristics

| Noise Figure 3.060 GHz LO = 1.0 mW RI = 100 Ohms MAX (dB) | VSWR 3.060 GHz LO = 1.0 mW RI = 100 Ohms MAX (Ratio) | IF Impedance 3.060 GHz LO = 1.0 mW RI = 100 Ohms MIN/MAX (Ohms) | Conversion Loss 3.060GHz LO = 1.0 mW RI = 100 Ohms MAX (dB) | Case Style | Part Number |
|--|---|--|--|---------------|----------------|
| 8.5 | - | 325 - 465 | - | CS100 | 1N21C |
| 7.5 | - | 325 - 465 | - | CS100 | 1N21D |
| 7.0 | 1.5 | 350 - 450 | - | CS100 | 1N21E |
| 7.0 | 1.5 | 350 - 450 | - | CS101 | 1N21WE |
| 6.0 | 1.3 | 350 - 450 | - | CS100 | 1N21F |
| 5.5 | 1.3 | 350 - 450 | 5.0 | CS100 | 1N21G |
| 5.5 | 1.3 | 350 - 450 | 5.0 | CS101 | 1N21WG |
| 8.5 | 1.5 | 335 - 465 | - | CS101 | 1N416C |
| 7.5 | 1.3 | 335 - 465 | - | CS101 | 1N416D |
| 7.0 | 1.3 | 335 - 465 | 7.0 | CS101 | 1N416E |
| 6.5 | 1.3 | 335 - 465 | 6.5 | CS101 | 1N416F |
| 6.0 | 1.3 | 335 - 465 | 6.0 | CS101 | 1N416G |

| Noise Figure 9.375 GHz LO = 1.0 mW RI = 100 Ohms MAX (dB) | VSWR 9.375 GHz LO = 1.0 mW RI = 100 Ohms MAX (Ratio) | IF Impedance 9.375 GHz LO = 1.0 mW RI = 100 Ohms MIN/MAX (Ohms) | Conversion Loss 9.375 GHz LO = 1.0 mW RI = 100 Ohms MAX (dB) | Case Style | Part Number |
|--|---|--|---|---------------|----------------|
| 12.0 | - | 200 - 600 | - | CS100 | 1N23 |
| 11.0 | - | 200 - 600 | - | CS100 | 1N23A |
| 10.0 | 1.5 | 335 - 465 | - | CS100 | 1N23B |
| 9.0 | 1.5 | 335 - 465 | - | CS100 | 1N23C |
| 8.5 | 1.3 | 335 - 465 | - | CS100 | 1N23D |
| 7.5 | 1.3 | 335 - 465 | 7.0 | CS100 | 1N23E |
| 7.5 | 1.3 | 335 - 465 | 7.0 | CS101 | 1N23WE |
| 7.0 | 1.3 | 335 - 465 | 6.5 | CS100 | 1N23F |
| 6.5 | 1.3 | 335 - 465 | 6.0 | CS100 | 1N23G |
| 6.5 | 1.3 | 335 - 465 | 6.0 | CS101 | 1N23WG |
| 6.0 | 1.3 | 335 - 465 | 5.5 | CS100 | 1N23H |
| 9.0 | 1.5 | 335 - 465 | - | CS101 | 1N415C |
| 8.5 | 1.3 | 335 - 465 | - | CS101 | 1N415D |
| 7.5 | 1.3 | 335 - 465 | 7.0 | CS101 | 1N415E |
| 7.0 | 1.3 | 335 - 465 | 6.5 | CS101 | 1N415F |
| 6.5 | 1.3 | 335 - 465 | 6.0 | CS101 | 1N415G |
| 6.0 | 1.3 | 335 - 465 | 5.5 | CS101 | 1N415H |

Notes:
 For matched Fwd pair use suffix M after P/N.
 For reverse device use suffix R.
 For matched Fwd and Rev use suffix MR.

Maximum Ratings

| | |
|-----------------------|------------------|
| Operating Temperature | -55°C to + 150°C |
| Storage Temperature | -65°C to + 200°C |

