

## S - X Band Point Contact Mixer Diodes

### Description

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.

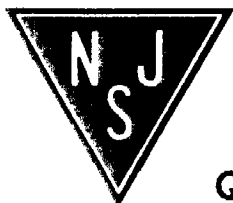
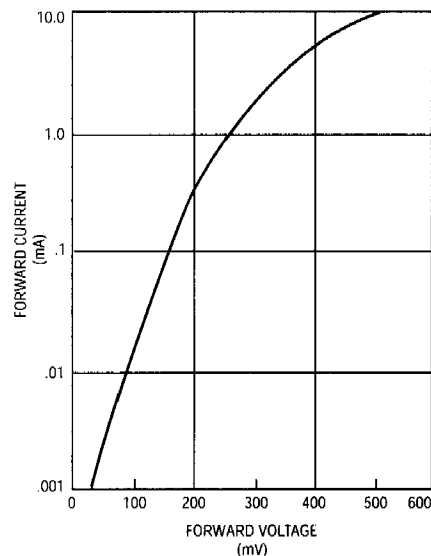
### Features

- Mechanical Reliability
- Low Noise Figure
- Wide Bandwidth

### Packaging

- Cartridge Style

### Typical Performance



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

# 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

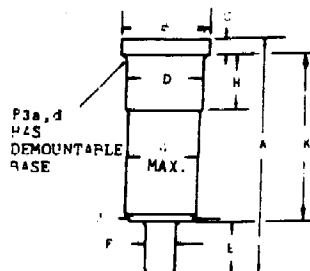
Noise Figure 9.375 GHz LO = 1.0 mW RI = 100 Ohms MAX (dB)	VSWR 9.375 GHz LO = 1.0 mW RI = 100 Ohms MAX (Ratio)	IF Impedance 9.375 GHz LO = 1.0 mW RI = 100 Ohms MIN/MAX (Ohms)	Conversion Loss 9.375 GHz LO = 1.0 mW RI = 100 Ohms MAX (dB)	Case Style	Part Number
12.0	-	200 - 600	-	CS100	1N23
11.0	-	200 - 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



	A	B	C	D	E	F	G	H	J	K
P3	.800 .840	.292 .298	.052	.246 .250	.180 .190	.092 .094	.240	.193 .199	.195 .225	.566 .593
P3a	.800 .840				.175 .195	.092 .094	.240 MAX		.195 .215	
P3b	.810			.250	.200	.095				
P3c	.799 .835	.291 .295	.051 .055	.248 .250	.197 .205	.091 .094				.551 .575
P3d	.800 .840	.292 .298	.047 .057	.246 .250	.180 .190	.092 .094	.222 .240	.193 .199	.195 .215	