

X TO K-BAND GaAs SCHOTTKY BARRIER MIXER DIODE

PD-020
ND5052-3G

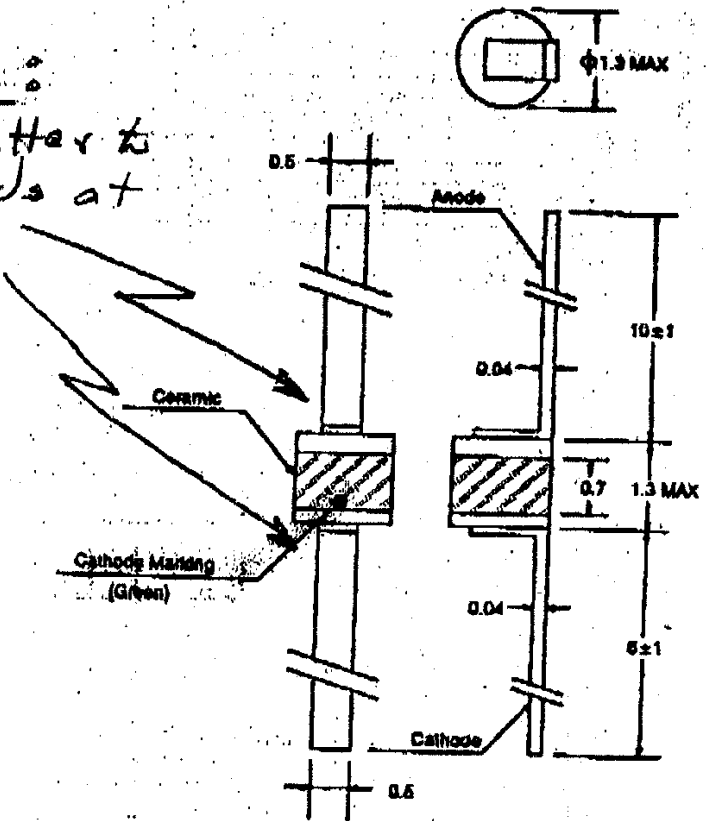
FEATURES

- X BAND MIXER DIODE
- LOW NOISE GaAs SCHOTTKY DIODE
NF = 5 dB TYP at f = 10 GHz
- LOW TERMINAL CAPACITANCE
Ct = 0.3 pF MAX at 1 MHz
- SMALL SIZE
- LOW COST

Note:
use diagonal cutter to
cut off ribbon leads at
body.

OUTLINE DIMENSIONS (Units in mm)

OUTLINE 3G



ABSOLUTE MAXIMUM RATINGS (TA = 25°C)

SYMBOLS	PARAMETERS	UNITS	RATINGS
V _R	Reverse Voltage	V	6.5
V _{RM}	Peak Reverse Voltage	V	6.5
I _F	Forward Current	mA	50
I _{FM}	Peak Forward Current	mA	150
T _J	Junction Temperature	°C	150
T _{STG}	Storage Temperature	°C	-65 to +150
T _{SDR}	Soldering Temperature	°C	230*

*One time within 10 seconds.

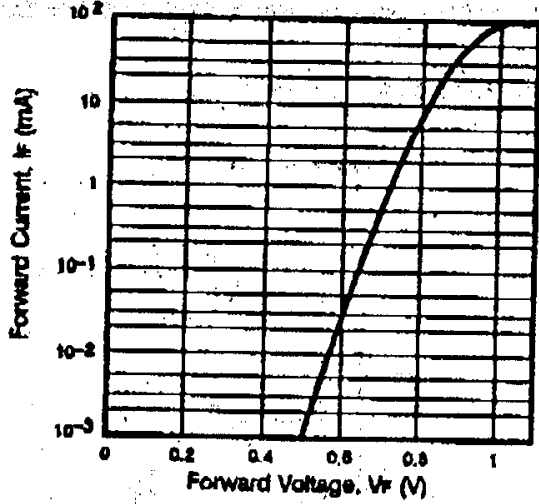
ELECTRICAL CHARACTERISTICS (TA = 25°C)

PART NUMBER PACKAGE OUTLINE		ND5052-3G 3G			
SYMBOLS	PARAMETERS AND CONDITIONS	UNITS	MIN	TYP	MAX
V _R	Reverse Voltage at I _R = 10 μA	V	6.5		
V _F	Forward Voltage at I _F = 50 mA	V			1
C _T	Total Capacitance at V _R = 0, f = 1 MHz	pF			0.3
NF	Noise Figure at f = 9375 MHz, P _i = 2 mW, N _F = 1.5 dB	dB		5	
R _S	Series Resistance, R _S = 50 V _{F3} - 150.75 V _{F2} + 100.75 V _{F1} V _{F1} : I _F = 1 mA, V _{F2} : I _F = 2.7 mA, V _{F3} : I _F = 20 mA	Ω			1.3
α	α = 1/(V _{F2} - V _{F1}) V _{F1} : I _F = 1 mA, V _{F2} : I _F = 2.7 mA	V-	31		

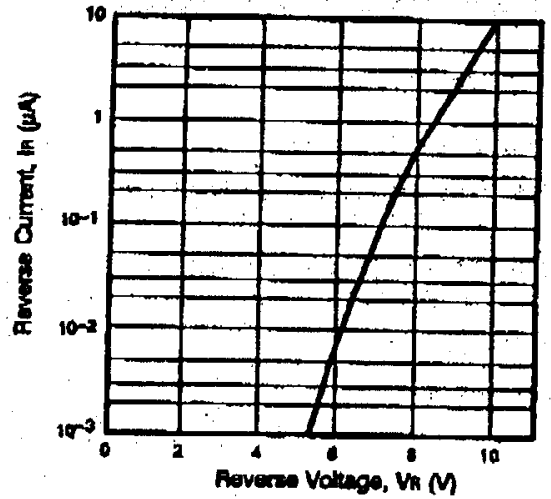
ND5052-3G

TYPICAL PERFORMANCE CHARACTERISTICS ($T_A = 25^\circ\text{C}$)

FORWARD CURRENT vs.
FORWARD VOLTAGE



REVERSE CURRENT vs.
REVERSE VOLTAGE



TERMINAL CAPACITANCE vs.
REVERSE VOLTAGE

