

NPN SILICON RF TRANSISTOR

DESCRIPTION:

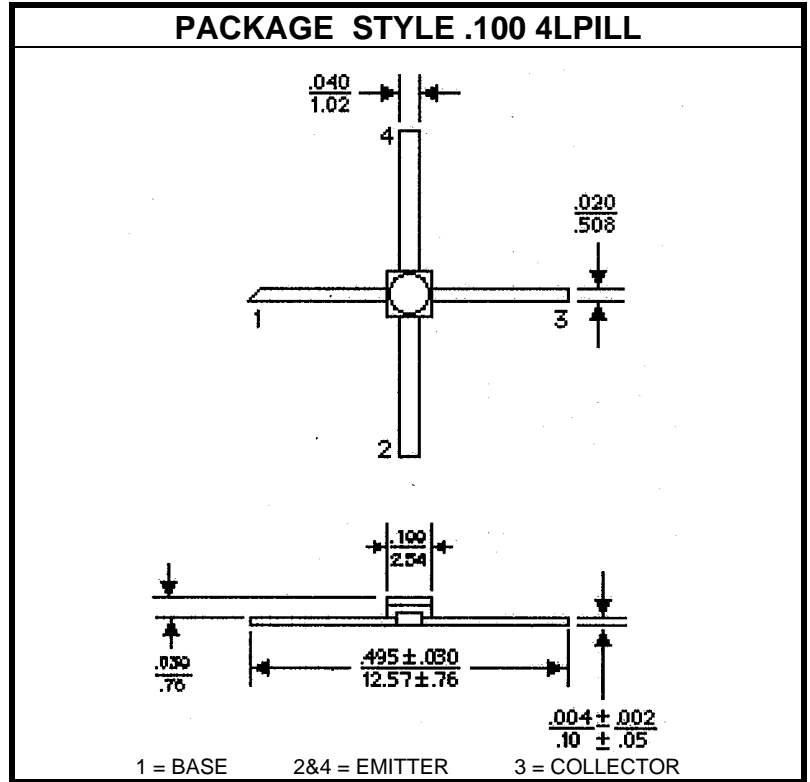
The **ASI NE02103** is Designed for Oscillator and Amplifier Applications up to 2.0 GHz.

FEATURES INCLUDE:

- High insertion gain, 18.5 dB at 500 MHz.
- High power gain, 1.5 dB at 500 MHz.
- Low noise figure, 12 dB at 2 GHz.
- For JAN level add suffix D

MAXIMUM RATINGS

I_C	70 mA
V_{CBO}	25 V
V_{CEO}	12 V
V_{EBO}	3.0 V
P_{DISS}	350 mW @ $T_A = 25\text{ }^\circ\text{C}$
T_J	-65 °C to +200 °C
T_{STG}	-65 °C to +200 °C
θ_{JC}	70 °C/W


CHARACTERISTICS $T_C = 25\text{ }^\circ\text{C}$

SYMBOL	TEST CONDITIONS			MINIMUM	TYPICAL	MAXIMUM	UNITS
I_{CBO}	$V_{CB} = 15\text{ V}$					1.0	μA
I_{EBO}	$V_{EB} = 2.0\text{ V}$					1.0	μA
h_{FE}	$V_{CE} = 10\text{ V}$	$I_C = 20\text{ mA}$		20		250	---
C_{CB}	$V_{CB} = 10\text{ V}$		$f = 1.0\text{ MHz}$		0.6	1.0	pF
f_t	$V_{CE} = 10\text{ V}$	$I_C = 20\text{ mA}$	$f = 1.0\text{ GHz}$		4.5		GHz
$ S_{21} ^2$	$V_{CE} = 10\text{ V}$	$I_C = 20\text{ mA}$	$f = 0.5\text{ GHz}$		18.5		dB
			$f = 1.0\text{ GHz}$		13		
			$f = 2.0\text{ GHz}$	5.5	6.5		
NF_{MIN}	$V_{CE} = 10\text{ V}$	$I_C = 3.0\text{ mA}$	$f = 0.5\text{ GHz}$		1.5	4.5	dB
	$V_{CE} = 10\text{ V}$	$I_C = 5.0\text{ mA}$	$f = 2.0\text{ GHz}$		2.7		