

## NTE23 Silicon NPN Transistor Ultra High Frequency Amp

**Description:**

The NTE23 is suitable for a low noise amplifier in the VHF to UHF band.

**Features:**

- Low Noise Figure: NF 3.0dB Typ. @ f = 500MHz
- High Power Gain:  $G_{pe}$  15dB Typ. @ f = 500MHz
- High Cutoff Frequency:  $f_T$  = 2.0GHz Typ

**Absolute Maximum Ratings:** ( $T_A = +25^\circ\text{C}$  unless otherwise specified)

Collector–Base Voltage, $V_{CBO}$ .....	30V
Collector–Emitter Voltage, $V_{CEO}$ .....	14V
Emitter–Base Voltage, $V_{EBO}$ .....	3.0V
Collector Current, $I_C$ .....	50mA
Total Power Dissipation, $P_T$ .....	250mW
Junction Temperatur, $T_J$ .....	+150°C
Storage Temperature Range, $T_{stg}$ .....	–55° to +150°C

**Electrical Characteristics:**

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = 15V, I_E = 0$	–	–	0.1	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = 2V, I_C = 0$	–	–	0.1	$\mu\text{A}$
DC Current Gain	$h_{FE}$	$V_{CE} = 10V, I_C = 10mA$	25	80	200	–
Gain–Bandwidth Product	$f_T$	$V_{CE} = 10V, I_C = 10mA$	1.5	2.0	–	GHz
Output Capacitance	$C_{ob}$	$V_{CB} = 10V, I_E = 0, f = 1MHz$	–	0.75	1.1	pF
Maximum Available Power Gain	$G_{pe}$	$V_{CE} = 10V, I_C = 10mA, f = 500MHz$	13	15	–	dB
Noise Figure	NF	$V_{CE} = 10V, I_C = 3mA, f = 500MHz$	–	3.0	4.0	dB

