



ELECTRONICS, INC.
 44 FARRAND STREET
 BLOOMFIELD, NJ 07003
 (973) 748-5089

NTE63 Silicon NPN Transistor High Gain, Low Noise Amp

Description:

The NTE63 is a silicon NPN high frequency transistor designed primarily for use in high-gain, low noise tuned and wideband small-signal amplifiers and applications requiring fast switching times.

Features:

- High Current Gain-Bandwidth Product: $f_T = 5\text{GHz Typ @ } f = 1\text{GHz}$
- High Power Gain: $G_{pe} = 12.5\text{dB Min @ } f = 1\text{GHz}$

Absolute Maximum Ratings:

Collector-Emitter Voltage, V_{CEO}	12V
Collector-Base Voltage, V_{CBO}	20V
Emitter-Base Voltage, V_{EBO}	2V
Continuous Collector Current, I_C	40mA
Total Device Dissipation ($T_L = +50^\circ\text{C}$), P_D	400mW
Derate Above 50°C	4.0mW/ $^\circ\text{C}$
Storage Temperature Range, T_{stg}	-65° to $+150^\circ\text{C}$
Thermal Resistance, Junction-to-Lead, R_{thJL}	250 $^\circ\text{C/W}$

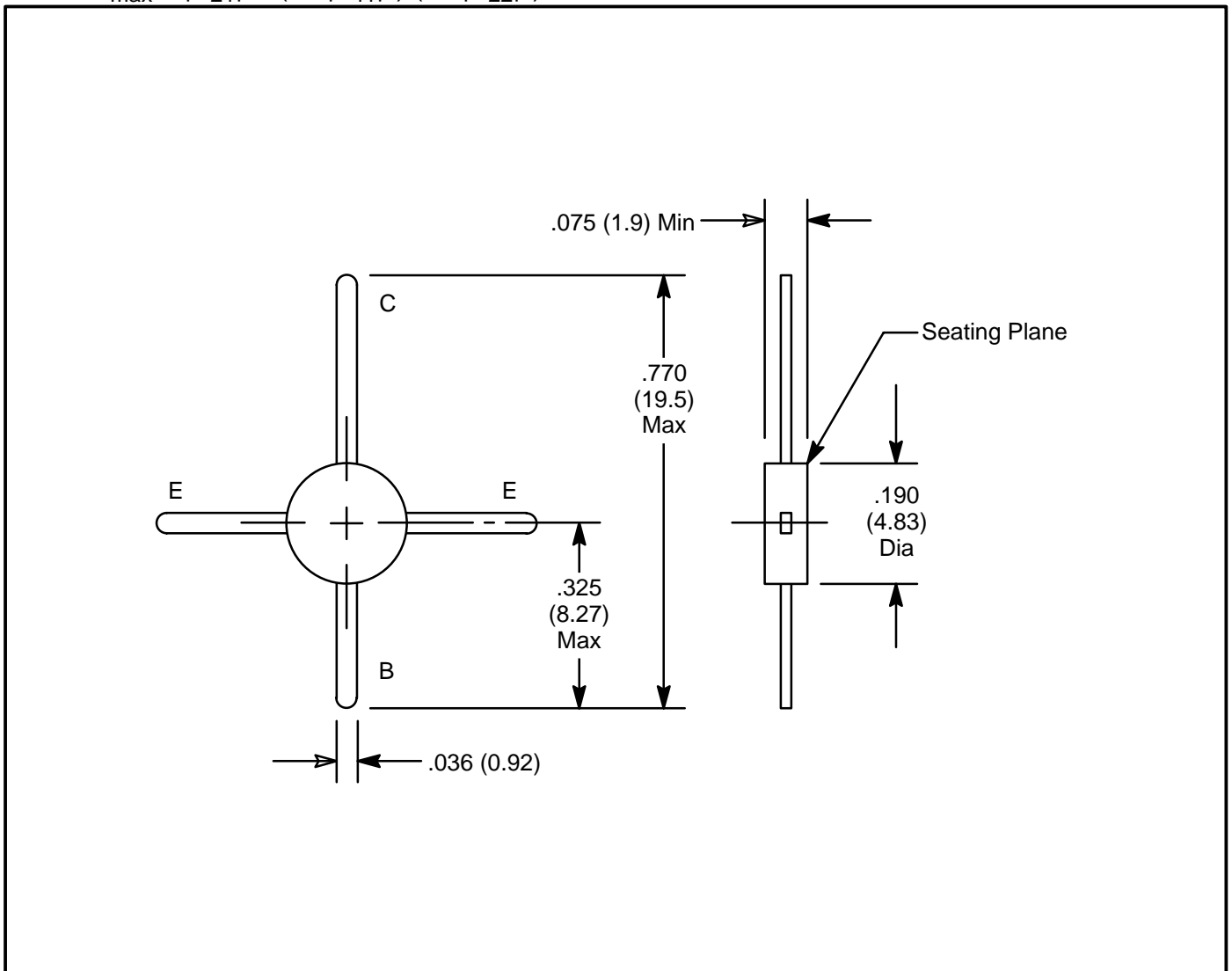
Electrical Characteristics: ($T_C = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
OFF Characteristics						
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 1\text{mA}, I_B = 0$	12	–	–	V
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 0.1\text{mA}, I_E = 0$	20	–	–	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 0.1\text{mA}, I_C = 0$	2	–	–	V
Collector Cutoff Current	I_{CBO}	$V_{CB} = 15\text{V}, I_E = 0$	–	–	50	nA

Electrical Characteristics (Cont'd): ($T_C = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
ON Characteristics						
DC Current Gain	h_{FE}	$I_C = 30\text{mA}, V_{CE} = 10\text{V}$	30	–	200	
Dynamic Characteristics						
Current Gain–Bandwidth Product	f_T	$I_C = 30\text{mA}, V_{CE} = 10\text{V}, f = 1\text{GHz}$	–	5.0	–	GHz
Collector–Base Capacitance	C_{cb}	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$	–	0.6	1.0	pF
Functional Tests						
Noise Figure	NF_{MIN}	$I_C = 5\text{mA}, V_{CE} = 10\text{V}, f = 1\text{GHz}$	–	2.5	–	dB
		$I_C = 5\text{mA}, V_{CE} = 10\text{V}, f = 2\text{GHz}$	–	4.0	–	dB
Power Gain at Optimum Noise Figure	G_{NF}	$I_C = 5\text{mA}, V_{CE} = 10\text{V}, f = 1\text{GHz}$	–	10	–	dB
		$I_C = 5\text{mA}, V_{CE} = 10\text{V}, f = 2\text{GHz}$	–	6	–	dB
Maximum Available Power Gain (Note 1)	G_{max}	$I_C = 30\text{mA}, V_{CE} = 10\text{V}, f = 1\text{GHz}$	–	12.5	–	dB
		$I_C = 30\text{mA}, V_{CE} = 10\text{V}, f = 2\text{GHz}$	–	7.5	–	dB

Note 1. $G_{max} = |S_{21}|^2 / (1 - |S_{11}|^2) (1 - |S_{22}|^2)$



X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Bipolar Transistors - BJT category](#):

Click to view products by [NTE manufacturer](#):

Other Similar products are found below :

[619691C](#) [MCH4017-TL-H](#) [MJ15024/WS](#) [MJ15025/WS](#) [BC546/116](#) [BC556/FSC](#) [BC557/116](#) [BSW67A](#) [HN7G01FU-A\(T5L,F,T](#)
[NJVMJD148T4G](#) [NSVMMBT6520LT1G](#) [NTE187A](#) [NTE195A](#) [NTE2302](#) [NTE2330](#) [NTE2353](#) [NTE316](#) [IMX9T110](#) [NTE63](#) [NTE65](#)
[C4460](#) [SBC846BLT3G](#) [2SA1419T-TD-H](#) [2SA1721-O\(TE85L,F\)](#) [2SA1727TLP](#) [2SA2126-E](#) [2SB1202T-TL-E](#) [2SB1204S-TL-E](#) [2SC5488A-](#)
[TL-H](#) [2SD2150T100R](#) [SP000011176](#) [FMC5AT148](#) [2N2369ADCSM](#) [2SB1202S-TL-E](#) [2SC2412KT146S](#) [2SC4618TLN](#) [2SC5490A-TL-H](#)
[2SD1816S-TL-E](#) [2SD1816T-TL-E](#) [CMXT2207 TR](#) [CPH6501-TL-E](#) [MCH4021-TL-E](#) [BC557B](#) [TTC012\(Q\)](#) [BULD128DT4](#) [JANTX2N3810](#)
[Jantx2N5416](#) [US6T6TR](#) [KSF350](#) [068071B](#)