

NTE102A (PNP) & NTE103A (NPN) Germanium Complementary Transistors Medium Power Amplifier

Description:

The NTE102A (PNP) and NTE103A (NPN) are Germanium complementary transistors in a TO1 type package designed for use as a medium power amplifier.

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

Collector–Base Voltage, V_{CBO}	32V
Emitter–Base Voltage, V_{EBO}	10V
Collector Current, I_C	1A
Power Dissipation, P_C	650mW
Operating Junction Temperature, T_J	$+90^\circ\text{C}$
Storage Temperature Range, T_{stg}	-55° to $+90^\circ\text{C}$

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector–Base Voltage	V_{CBO}	$I_C = 200\mu\text{A}, I_E = 0$	32	–	–	V
Collector Cutoff Current	I_{CBO}	$V_{CB} = 10\text{V}, I_E = 0$	–	–	25	μA
DC Current Gain	h_{FE1}	$V_{CB} = 0, I_E = 50\text{mA}$	63	–	295	
	h_{FE2}	$V_{CB} = 0, I_E = 300\text{mA}$	69	–	273	
Common–Emitter Cutoff Frequency	$f_{\alpha e}$	$V_{CB} = 2\text{V}, I_E = 10\text{mA}$	10	–	–	kHz
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 500\text{mA}, I_B = 50\text{mA}$	–	0.17	–	V
Noise Figure	NF	$V_{CB} = 5\text{V}, I_E = 5\text{mA}, f = 1\text{kHz}$	–	–	25	dB

