

NTE104

Germanium PNP Transistor

Audio Frequency Power Amplifier

Description:

The NTE104 is a Germanium PNP Alloy Junction transistor in a TO3 type package designed as an audio frequency power output amplifier.

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

Collector–Base Voltage, V_{CBO}	50V
Collector–Emitter Voltage ($R_{BE} = 68\Omega$), V_{CER}	35V
Emitter–Base Voltage, V_{EBO}	10V
Collector Current, I_C	10A
Emitter Current, I_E	10A
Base Current, I_B	3A
Power Dissipation ($T_C \leq +55^\circ\text{C}$), P_D	90W
Operating Junction Temperature, T_J	$+100^\circ\text{C}$
Storage Temperature Range, T_{stg}	-55° to $+100^\circ\text{C}$

Note 1. Matched pairs are available upon request (NTE104MP). Matched pairs have their gain specification (h_{FE}) matched to within 10% of each other.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector–Emitter Breakdown Voltage	$V_{(BR)CER}$	$I_{C(peak)} = -0.6\text{A}$, $R_{BE} = 68\Omega$	35	–	–	V
Collector Cutoff Current	I_{CBO}	$V_{CB} = 30\text{V}$, $I_E = 0$	–	–	1.0	mA
DC Current Gain	h_{FE}	$V_{CE} = 2\text{V}$, $I_C = 20\text{mA}$	50	90	165	
Base–Emitter Input Voltage	V_{BE}	$V_{CE} = 2\text{V}$, $I_C = 1\text{A}$	–	0.38	–	V
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 4\text{A}$, $I_B = 0.4\text{A}$	–	0.29	–	V
Transition Frequency	f_T	$V_{CB} = 2\text{V}$, $I_E = 1\text{A}$	–	300	–	kHz

