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

NTE179
Germanium PNP Transistor
Audio Power Amplifier, High Current Switch

Description:

The NTE179 is a PNP type germainum transistor in a TO3 type case designed for high–current switching applications requiring low saturation voltages, fast switching times, and good safe operating conditions.

Features:

- Low Collector–Emitter Saturation Voltage:
  $V_{CE(sat)}$ = 0.5V (Max) @ I_C = 5A

Absolute Maximum Ratings:

Collector–Emitter Voltage, V_{CEO} 40V
Collector–Base Voltage, V_{CB} 90V
Emitter–Base Volatge, V_{EB} 2V
Continuous Collector Current, I_C 25A
Base Current, I_B 5A
Total Device Dissipation (T_C = +25°C), P_D 106W
Derate above +25°C . . . . . 1.25W/°C
Operating Junction Temperature, T_J . . . . . –65° to + 110°C
Storage Junction Temperature, T_{stg} . . . . . –65° to + 110°C
Thermal Resistance, Junction–to–Case, R_{thJC} . . . . . 0.8°C/W

Electrical Characteristics: (T_A = +25°C unless otherwise noted)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
OFF Characteristics						
Collector–Base Breakdown Voltage	$V_{(BR)CBO}$	I_C = 100mA, I_B = 0	40	–	–	V
Emitter–Base Breakdown Voltage	$V_{(BR)EBO}$	I_E = 100mA, I_C = 0	2	–	–	V
Collector–Emitter Sustaining Voltage	$V_{CE(sus)}$	I_C = 5A	40	–	–	V
Collector Cutoff Current	I_{CBO}	V_{CB} = 2V, I_E = 0	–	–	200	µA
	I_{CEX}	V_{CE} = 90V, $V_{BE(off)}$ = 0.2V	–	–	20	mA
Collector–Emitter Cutoff Current	I_{CER}	V_{CE} = 50V, R_{EB} = 100Ω	–	–	10	mA

Electrical Characteristics (Cont'd): (T_A = +25°C unless otherwise noted)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
ON Characteristics						
DC Current Gain	h_{FE}	I_C = 1A, V_{CE} = 2V	65	–	300	
		I_C = 5A, V_{CE} = 2V	55	–	–	
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = 5A, I_B = 100mA	–	–	0.5	V
Base–Emitter ON Voltage	$V_{BE(on)}$	I_C = 1A, V_{CE} = 2V	–	–	0.45	V
		I_C = 5A, V_{CE} = 2V	–	–	0.60	V
Dynamic Characteristics						
Current Gain–Bandwidth Product	f_T	I_C = 500mA, V_{CE} = 10V	500	–	–	kHz