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NTE2695
Silicon PNP Transistor
Low Power Audio Amp
TO–126 Type Package

Description:

The NTE2695 is a silicon PNP transistor in a TO–126 type package designed for low power audio amplifier and low–current, high–speed switching applications.

Features:

- High Collector–Emitter Sustaining Voltage
- High DC Current Gain at I_C = 200mA
- Low Collector–Emitter Saturation Voltage
- High Current Gain Bandwidth Product
- Annular Construction for Low Leakage

Absolute Maximum Ratings: (Note 1)

Collector–Emitter Voltage, V_{CEO} 100V
Collector–Base Voltage, V_{CBO} 100V
Emitter–Base Voltage, V_{EBO} 7V
Collector Current, I_C
  Continuous 4A
  Peak 8A
Base Current, I_B 10A
Total Power Dissipation (T_C = +25°C), P_D 15W
  Derate above +25°C . . . . . 120mW/°C
Total Power Dissipation (T_A = +25°C), P_D 1.5W
  Derate above +25°C . . . . . 12mW/°C
Operating Junction Temperature Range, T_J . . . . . –65° to +150°C
Storage Temperature Range, T_{stg} . . . . . –65° to +150°C
Thermal Resistance, Junction–to–Case, R_{thJC} . . . . . 8.34°C/W
Thermal Resistance, Junction–to–Ambient, R_{thJA} . . . . . 83.4°C/W

Note 1. Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur and reliability may be affected.

RoHS 2002/95/EC

Electrical Characteristics: (T_C = +25°C unless otherwise specified))

Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
OFF Characteristics							
Collector–Emitter Sustaining Voltage	$V_{CEO(sus)}$	I_C = 10mA, I_B = 0		100	–	–	V
Collector Cutoff Current	I_{CBO}	V_{CB} = 100V, I_E = 0		–	–	0.1	μA
			T_C +125°C	–	–	0.1	μA
Emitter Cutoff Current	I_{EBO}	V_{BE} = 7V, I_C = 0		–	–	0.1	μA
ON Characteristics							
DC Current Gain	h_{FE}	V_{CE} = 1V	I_C = 200mA	40	–	180	
			I_C = 1A	15	–	–	
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = 500mA, I_B = 50mA		–	–	0.3	V
		I_C = 1A, I_B = 100mA		–		0.6	V
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	I_C = 2A, I_B = 200mA		–	–	1.8	V
Base–Emitter ON Voltage	$V_{BE(on)}$	I_C = 500mA, V_{CE} = 1V		–	–	1.5	V
Dynamic Characteristics							
Current–Gain–Bandwidth Product	f_T	I_C = 100mA, V_{CE} = 10V, f_{test} = 10MHz		40	–	–	MHz
Output Capacitance	C_{ob}	V_{CB} 10V, I_E = 0, f = 0.1MHz		–	–	50	pF