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

NTE280 (NPN) & NTE281 (PNP)
Silicon Complementary Trasistors
Audio Power Amplifier

Description:

The NTE280 (NPN) and NTE281 (PNP) are silicon complementary transistors in a TO3 type package designed for use in high power, high fidelity audio frequency amplifier applications.

Features:

- High Power Dissipation: P_C = 100W
- Collector–Emitter Breakdown Voltage: $V_{(BR)CEO}$ = 140V

Absolute Maximum Ratings: (T_A = +25°C unless otherwise specified)

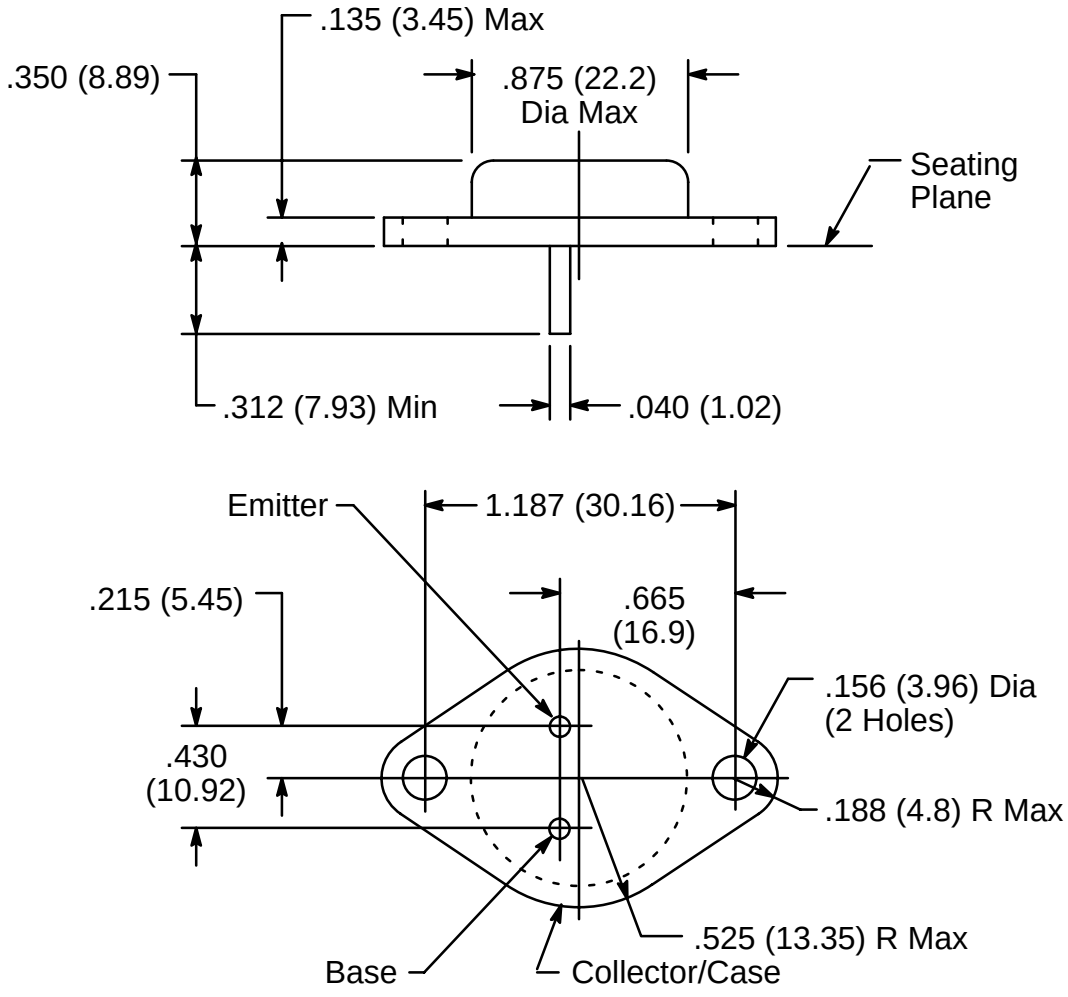
Collector–Emitter Voltage, V_{CEO} 140V
Collector–Base Voltage, V_{CBO} 140V
Emitter–Base Voltage, V_{EBO} 5V
Collector Current, I_C 12A
Emitter Current, I_E . . . . . –12A
Collector Power Dissipation (T_C = +25°C), P_C 100W
Operating Junction Temperature, T_J . . . . . +150°C
Storage Temperature Range, T_{stg} . . . . . –65° to +150°C

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector–Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C = 100mA, I_B = 0	140	–	–	V
Emitter–Base Breakdown Voltage	$V_{(BR)EBO}$	I_E = 10mA, I_C = 0	5	–	–	V
Collector Cutoff Current	I_{CBO}	V_{CB} = 60V, I_E = 0	–	–	100	µA
Emitter Cutoff Current	I_{EBO}	V_{EB} = 5V, I_C = 0	–	–	100	µA
DC Current Gain	h_{FE}	V_{CE} = 5V, I_C = 2A	40	–	140	
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = 7A, I_B = 700mA	–	–	3.0	V
Base–Emitter ON Voltage	$V_{BE(on)}$	V_{CE} = 5V, I_C = 7A	–	–	2.5	V
Current–Gain Bandwidth Product	f_T	V_{CE} = 5V, I_C = 2A	–	5	–	MHz
Output Capacitance	C_{cb}	V_{CE} = 10V, I_E = 0, f = 1MHz	–	220	–	pF

Note 1. NTE280MP is a matched pair of NTE280 with their DC Current Gain (h_{FE}) matched to within 10% of each other.

Note 2. NTE281MCP is a matched complementary pair containing 1 each of NTE280 (NPN) and NTE281 (PNP).


.135 (3.45) Max
.350 (8.89)
.875 (22.2)
Dia Max
Seating
Plane
.312 (7.93) Min
.040 (1.02)
Emitter
1.187 (30.16)
.215 (5.45)
.665
(16.9)
.156 (3.96) Dia
(2 Holes)
.430
(10.92)
.188 (4.8) R Max
.525 (13.35) R Max
Base
Collector/Case