ELECTRONICS, INC.
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NTE28
Germanium PNP Transistor
High Current, High Gain Amplifier

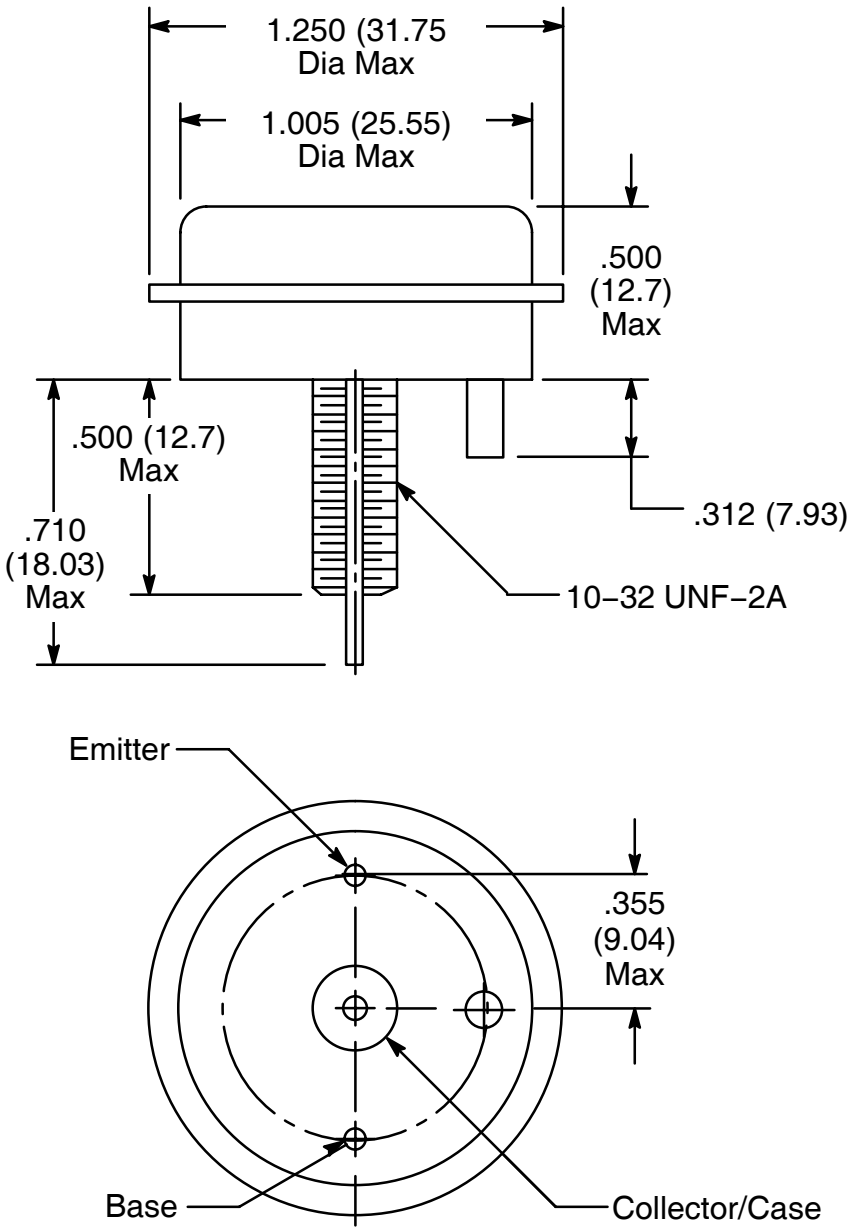
Absolute Maximum Ratings:

Collector–Emitter Voltage, V_{CEO} 45V
Collector–Emitter Voltage, V_{CES} 60V
Collector–Base Voltage, V_{CB} 60V
Emitter–Base Voltage, V_{EB} 30V
Collector Current–Continuous, I_C 60A
Total Device Dissipation (T_C = +25°C), P_D 170W
Derate above 25°C . . . . . 2.0W/°C
Operating Junction Temperature Range, T_J . . . . . –65° to +110°C
Storage Temperature Range, T_{stg} . . . . . –65° to +110°C
Thermal Resistance, Junction–to–Case, R_{thJC} . . . . . 0.5°C/W

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
OFF Characteristics						
Collector–Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C = 1A, I_B = 0, Note 1	45	–	–	V
	$V_{(BR)CES}$	I_C = 300mA, V_{BE} = 0	60	–	–	V
Floating Potential	V_{EBF}	V_{CB} = 60V, I_E = 0	–	–	0.5	V
Collector Cutoff Current	I_{CEX}	V_{CE} = 45V, $V_{BE(off)}$ = 2V, T_C = +71°C	–	–	15	mA
	I_{CBO}	V_{CB} = 2V, I_E = 0	–	–	0.2	mA
		V_{CB} = 60V, I_E = 0	–	–	4.0	mA
Emitter Cutoff Current	I_{EBO}	V_{BE} = 30V, I_C = 0	–	–	4.0	mA
		V_{BE} = 30V, I_C = 0, T_C = +71°C	–	–	15	mA
ON Characteristics (Note 1)						
DC Current Gain	h_{FE}	I_C = 15A, V_{CE} = 2V	60	–	180	
		I_C = 60A, V_{CE} = 2V	15	–	–	
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = 15A, I_B = 1A	–	–	0.15	V
		I_C = 60A, I_B = 6A	–	–	0.3	V
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	I_C = 15A, I_B = 1A	–	–	0.6	V
		I_C = 60A, I_B = 6A	–	–	1.0	V
Small–Signal Characteristics						
Common–Emitter Cutoff Frequency	$f_{\alpha e}$	I_C = 15A, V_{CE} = 2V	2	–	–	kHz

Note 1. To avoid excessive heating of the collector junction, perform test with pulse method.


1.250 (31.75
Dia Max
1.005 (25.55)
Dia Max
.500
(12.7)
Max
.500 (12.7)
Max
.710
(18.03)
Max
.312 (7.93)
10–32 UNF–2A
Emitter
.355
(9.04)
Max
Base
Collector/Case