ELECTRONICS, INC.
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NTE160
Germanium PNP Transistor
RF–IF Amp, FM Mixer OSC

Description:

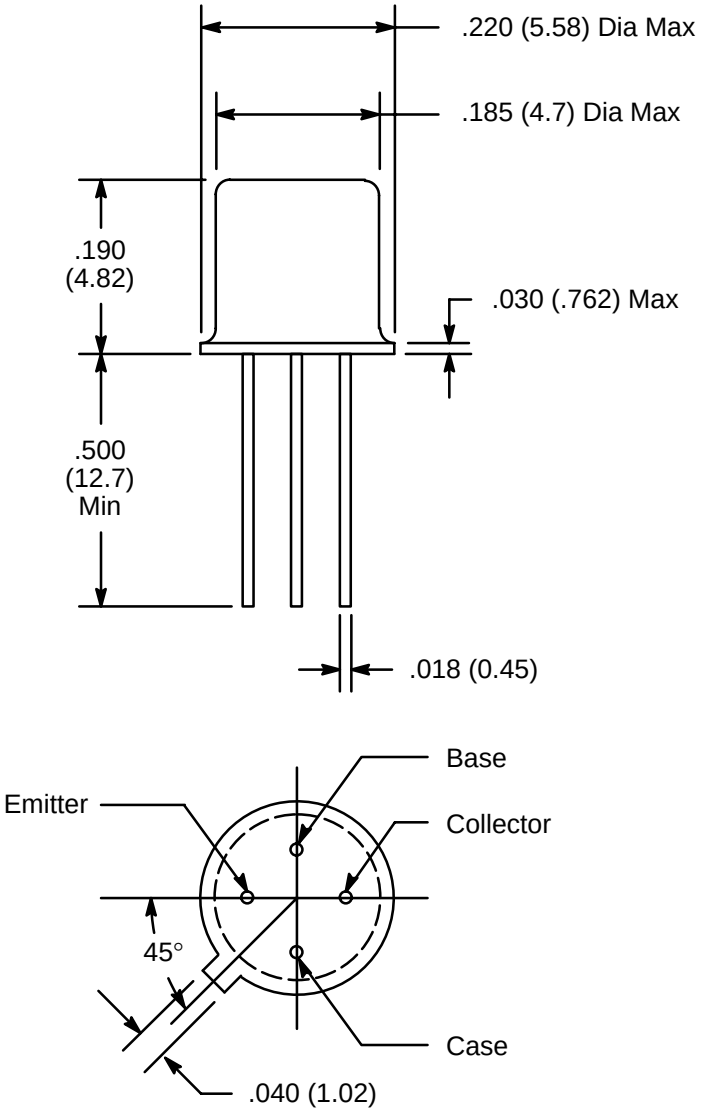
The NTE160 is a germanium mesa PNP transistor in a TO72 metal case designed for use as a preamplifier mixer and oscillator up to 900MHz.

Absolute Maximum Ratings:

Collector–Emitter Voltage (V_{BE} = 0), V_{CES} 20V
Collector–Emitter Voltage, (I_B = 0), V_{CEO} 16V
Emitter–Base Voltage (I_C = 0), V_{EBO} 0.3V
Collector Current, I_C 10mA
Total Power Dissipation (T_A = +45°C), P_{tot} 60mW
Operating Junction Temperature, T_J . . . . . +90°C
Storage Temperature Range, T_{stg} . . . . . –30° to +75°C
Thermal Resistance, Junction–to–Case, R_{thJC} . . . . . 400°C/W max
Thermal Resistance, Junction–to–Ambient, R_{thJA} . . . . . 750°C/W max

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cutoff Current	I_{CES}	V_{CE} = –20V, V_{BE} = 0	–	–	–8	µA
	I_{CEO}	V_{CE} = –15V, I_B = 0	–	–	–500	µA
Emitter Cutoff Current	I_{EBO}	V_{EB} = –0.3V, I_C = 0	–	–	–100	µA
Base–Emitter Voltage	V_{BE}	I_C = –2mA, V_{CE} = –10V	–	–350	–	mV
		I_C = –5mA, V_{CE} = –5V	–	–400	–	mV
DC Current Gain	h_{FE}	I_C = –2mA, V_{CE} = –10V	–	50	–	
		I_C = –5mA, V_{CE} = –5V	–	42	–	
Transition Frequency	f_T	I_C = –2mA, V_{CE} = –10V, f = 100MHz	–	700	–	MHz
Reverse Capacitance	$–C_{re}$	I_C = –2mA, V_{CE} = –10V, f = 450kHz	–	0.23	–	pF
Noise Figure	NF	I_C = –2mA, V_{CE} = –10V, R_g = 60Ω, f = 800MHz	–	5	6	dB
Power Gain	G_{pb}	I_C = –2mA, V_{CE} = –10V, R_L = 2kΩ, f = 800MHz	11	14	–	dB


.220 (5.58) Dia Max
.185 (4.7) Dia Max
.190
(4.82)
.030 (.762) Max
.500
(12.7)
Min
.018 (0.45)
Base
Emitter
Collector
45°
Case
.040 (1.02)