ELECTRONICS, INC.
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NTE233
Silicon NPN Transistor
Video IF, Oscillator

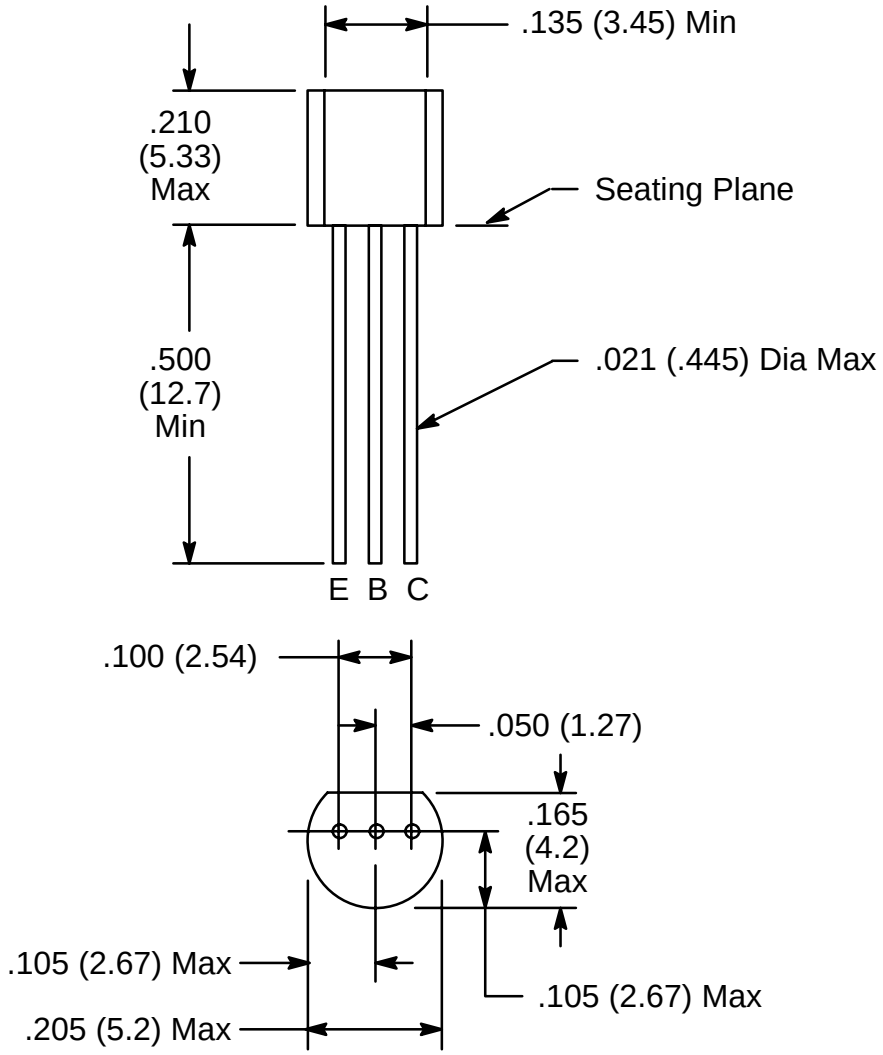
Absolute Maximum Ratings:

Collector–Emitter Voltage, V_{CEO} 30V
Collector–Base Voltage, V_{CBO} 30V
Emitter–Base Voltage, V_{EBO} 3V
Collector Current, I_C 100mA
Total Power Dissipation (T_A = +25°C), P_T 625mW
Derate above +25°C . . . . . 5mW/°C
Operating Junction Temperature, T_J . . . . . +150°C
Storage Temperature Range, T_{stg} . . . . . –55° to +150°C
Lead Temperature (During Soldering, 1/16” ±1/32” from case, 10sec), T_L . . . . . +230°C

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector–Base Breakdown Voltage	$V_{(BR)CBO}$	I_C = 100μA, I_E = 0	30	–	–	V
Emitter–Base Breakdown Voltage	$V_{(BR)EBO}$	I_E = 10μA, I_C = 0	3	–	–	V
Collector Cutoff Current	I_{CBO}	V_{CB} = 30V, I_E = 0	–	–	50	nA
	I_{CEO}	V_{CE} = 30V, I_B = 0	–	–	1	μA
DC Pulse Current Gain	h_{FE}	I_C = 10mA, V_{CE} = 10V, Note 1	20	–	100	
Collector Saturation Voltage	$V_{CE(sat)}$	I_C = 20mA, I_B = 0.1mA, Note 1	–	0.6	–	V
Collector–Emitter Sustaining Voltage	$V_{CEO(sus)}$	I_C = 1mA, I_B = 0, Note 1	30	–	–	V
Current Gain–Bandwidth Product	f_T	I_C = 10mA, V_{CE} = 10V, f = 100MHz	300	–	700	MHz
Power Gain, Fixed Neutralization	G_{pe}	I_C = 10mA, V_{CE} = 10V, f = 45MHz	25	–	–	dB
Reverse Transfer Capacitance	C_{re}	I_E = 0, V_{CB} = 10V, f ≤ 1MHz	0.6	–	1.1	pF
Output Admittance, Input Short Circuit	g_{oe}	I_C = 10mA, V_{CE} = 10V, f = 45MHz	30	–	200	μmho

Note 1. Pulse Test: Pulse Width = 300μs, Duty Cycle = 1%.


.135 (3.45) Min
.210
(5.33)
Max
Seating Plane
.500
(12.7)
Min
.021 (.445) Dia Max
E B C
.100 (2.54)
.050 (1.27)
.165
(4.2)
Max
.105 (2.67) Max
.105 (2.67) Max
.205 (5.2) Max