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NTE2643
Silicon NPN Transistor, VHF/UHF Low Noise Amp (Surface Mount)

Features:
- Low Noise Figure, High Gain
- NF = 1.1dB, $|S_{21e}|^2$ = 13dB (f = 1GHz)

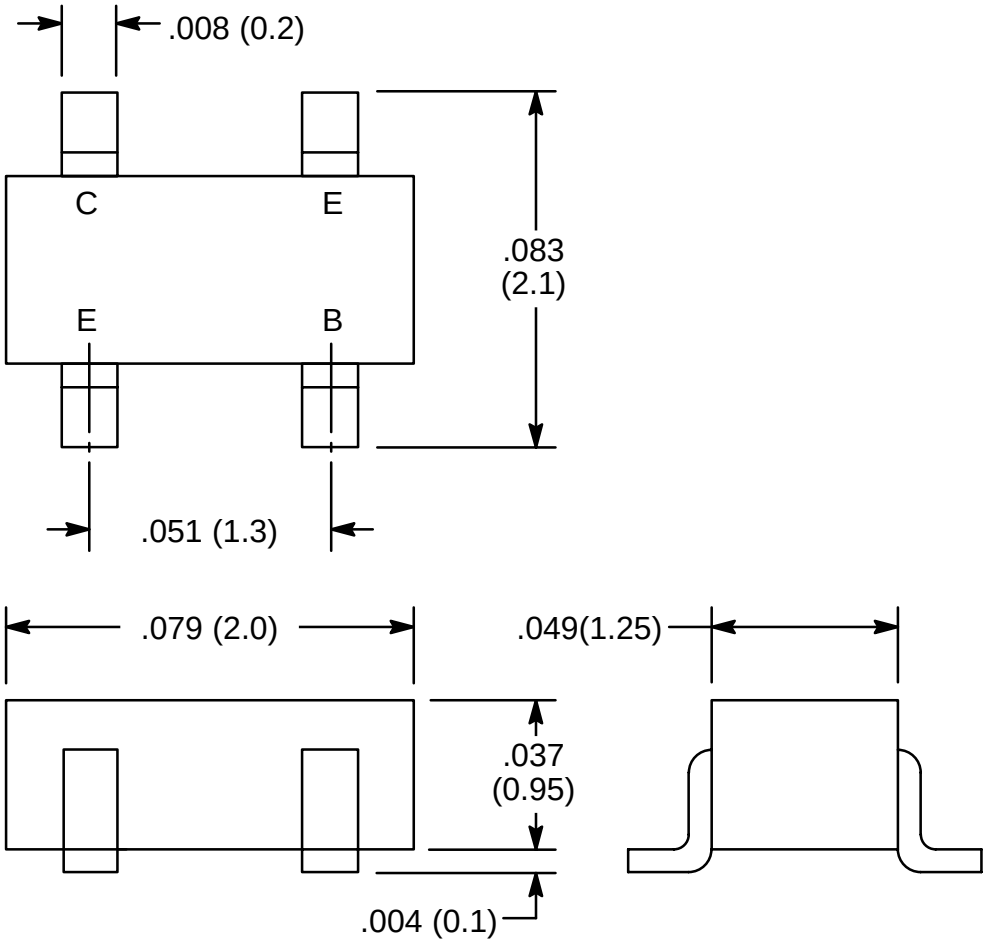
Absolute Maximum Ratings: (T_A = +25°C unless otherwise specified)

Collector–Base Voltage, V_{CBO} 20V
Collector–Emitter Voltage, V_{CEO} 12V
Emitter–Base Voltage, V_{EBO} 3V
Collector Current, I_C 80mA
Base Current, I_B 40mA
Collector Power Dissipation, P_C 100mW
Operating Junction Temperature, T_J . . . . . +125°C
Storage Temperature Range, T_{stg} . . . . . –55° to +125°C

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cutoff Current	I_{CBO}	V_{CB} = 10V, I_E = 0	–	–	1	μA
Emitter Cutoff Current	I_{EBO}	V_{EB} = 1V, I_C = 0	–	–	1	μA
DC Current Gain	h_{FE}	V_{CE} = 10V, I_C = 20mA	80	–	240	
Output Capacitance	C_{ob}	V_{CB} = 10V, I_E = 0, f = 1MHz, Note 1	–	1.1	1.6	pF
Reverse Transfer Capacitance	C_{re}		–	0.65	1.05	pF
Transition Frequency	f_T	V_{CE} = 10V, I_C = 20mA	5	7	–	GHz
Insertion Gain	$\|S_{21e}\|^2$	V_{CE} = 10V, I_C = 20mA, f = 500MHz	–	18	–	dB
		V_{CE} = 10V, I_C = 20mA, f = 1GHz	9.5	13.0	–	dB
Noise Figure	NF	V_{CE} = 10V, I_C = 5mA, f = 500MHz	–	1	–	dB
		V_{CE} = 10V, I_C = 5mA, f = 1GHz	–	1.1	2.0	dB

Note 1. C_{re} is measured by 3 terminal method with capacitance bridge.


.008 (0.2)
C
E
E
B
.083
(2.1)
.051 (1.3)
.079 (2.0)
.049(1.25)
.037
(0.95)
.004 (0.1)