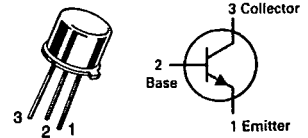


MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage(1)	V_{CEO}	150	Vdc
Collector-Base Voltage	V_{CBO}	150	Vdc
Emitter-Base Voltage	V_{EBO}	5.0	Vdc
Collector Current — Continuous	I_C	200	mAdc
Total Device Dissipation @ $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	0.8 4.57	Watt mW/°C
Total Device Dissipation @ $T_C = 25^\circ\text{C}$ Derate above 25°C	P_D	5.0 28.6	Watts mW/°C
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-65 to +200	°C

**AMPLIFIER TRANSISTOR****NPN SILICON**

Refer to 2N3498 for graphs.

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted.)

Characteristic	Symbol	Min	Max	Unit
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OFF CHARACTERISTICS

Collector-Emitter Breakdown Voltage(2) ($I_C = -30\text{ mA}$, $I_E = 0$)	$V_{(BR)CEO}$	150	—	Vdc
Collector-Base Breakdown Voltage ($I_C = 100\text{ }\mu\text{A}$, $I_E = 0$)	$V_{(BR)CBO}$	150	—	Vdc
Emitter-Base Breakdown Voltage ($I_E = 100\text{ }\mu\text{A}$, $I_C = 0$)	$V_{(BR)EBO}$	5.0	—	Vdc
Collector Cutoff Current ($V_{CB} = 100\text{ Vdc}$, $I_E = 0$) ($V_{CB} = 100\text{ Vdc}$, $I_E = 0$, $T_A = 150^\circ\text{C}$)	I_{CBO}	— —	0.010 10	μA
Emitter Cutoff Current ($V_{EB} = 4.0\text{ Vdc}$, $I_C = 0$)	I_{EBO}	—	0.10	μA

ON CHARACTERISTICS

DC Current Gain(2) ($I_C = 0.1\text{ mA}$, $V_{CE} = 10\text{ Vdc}$) ($I_C = 30\text{ mA}$, $V_{CE} = 10\text{ Vdc}$) ($I_C = 30\text{ mA}$, $V_{CE} = 10\text{ Vdc}$, $T_A = -55^\circ\text{C}$)	h_{FE}	15 30 12	— 120 —	—
Collector-Emitter Saturation Voltage(2) ($I_C = 50\text{ mA}$, $I_E = 5.0\text{ mA}$)	$V_{CE(sat)}$	—	1.0	Vdc
Base-Emitter Saturation Voltage(2) ($I_C = 50\text{ mA}$, $I_E = 5.0\text{ mA}$)	$V_{BE(sat)}$	—	0.9	Vdc

SMALL-SIGNAL CHARACTERISTICS

Output Capacitance ($V_{CB} = 20\text{ Vdc}$, $I_E = 0$, $f = 140\text{ kHz}$)	C_{obo}	—	9.0	pF
Input Capacitance ($V_{EB} = 0.5\text{ Vdc}$, $I_C = 0$, $f = 140\text{ kHz}$)	C_{ibo}	—	80	pF
Small-Signal Current Gain ($I_C = 1.0\text{ mA}$, $V_{CE} = 5.0\text{ V}$, $f = 1\text{ kHz}$)	h_{fe}	25	—	—
Current Gain — High Frequency ($V_{CE} = 10\text{ Vdc}$, $I_C = 30\text{ mA}$, $f = 20\text{ MHz}$)	$ h_{fe} $	2.0	—	—
Real Part of Input Impedance ($I_C = 10\text{ mA}$, $V_{CE} = 10\text{ V}$, $f = 100\text{ MHz}$)	$\text{Re}(h_{ie})$	—	30	Ohms

(1) Between 0 and 30 mA.

(2) Pulse Test: Pulse Width $\leq 300\text{ }\mu\text{s}$, Duty Cycle $\leq 1.0\%$.