

Type 2N3634
Geometry TBD
Polarity PNP
Qual Level: Pending

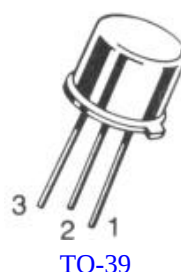
Generic Part Number:
2N3634

REF: MIL-PRF-19500/357

Features:

[Request Quotation](#)

- General-purpose low-power amplifier transistor which operates over a wide temperature range.
- Housed in a [TO-39](#) case.
- Also will be available in chip form using the TBD chip geometry.
- The Min and Max limits shown are per [MIL-PRF-19500/357](#) which Semicoa meets in all cases.



Maximum Ratings

$T_C = 25^{\circ}\text{C}$ unless otherwise specified

Rating	Symbol	Rating	Unit
Collector-Emitter Voltage	V_{CEO}	140	V
Collector-Base Voltage	V_{CBO}	140	V
Emitter-Base Voltage	V_{EBO}	5.0	V
Collector Current, Continuous	I_C	1.0	A
Operating Junction Temperature	T_J	-65 to +200	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-65 to +200	$^{\circ}\text{C}$

Electrical Characteristics

 $T_C = 25^{\circ}\text{C}$ unless otherwise specified

OFF Characteristics	Symbol	Min	Max	Unit
Collector-Base Breakdown Voltage $I_C = 10\ \mu\text{A}$	$V_{(BR)CBO}$	140	---	V
Collector-Emitter Breakdown Voltage $I_C = 10\ \text{mA}$	$V_{(BR)CEO}$	140	---	V
Emitter-Base Breakdown Voltage $I_E = 10\ \mu\text{A}$, pulsed	$V_{(BR)EBO}$	5.0	---	V
Collector-Base Cutoff Current $V_{CB} = 100\ \text{V}$	I_{CBO1}	---	100	nA
$V_{CB} = -100\ \text{V}$, $T_A = +150^{\circ}\text{C}$	I_{CBO2}	---	100	μA
Emitter-Base Cutoff Current $V_{EB} = 3.0\ \text{V}$	I_{EBO}	---	50	nA
Collector-Emitter Cutoff Current $V_{CE} = 100\ \text{V}$	I_{CEO}	---	10	μA

ON Characteristics	Symbol	Min	Max	Unit
Forward current Transfer Ratio				
$I_C = 0.1\ \text{mA}$, $V_{CE} = 10\ \text{V}$ (pulsed)	h_{FE1}	25	---	---
$I_C = 1.0\ \text{mA}$, $V_{CE} = 1.0\ \text{V}$ (pulsed)	h_{FE2}	45	---	---
$I_C = 10\ \text{mA}$, $V_{CE} = 10\ \text{V}$ (pulsed)	h_{FE3}	50	---	---
$I_C = 50\ \text{mA}$, $V_{CE} = 10\ \text{V}$ (pulsed)	h_{FE4}	50	150	---
$I_C = 150\ \text{mA}$, $V_{CE} = 10\ \text{V}$ (pulsed)	h_{FE5}	30	---	---
$I_C = 50\ \text{mA}$, $V_{CE} = 10\ \text{V}$ (pulsed), $T_A = -55^{\circ}\text{C}$	h_{FE6}	25	---	---
Collector-Emitter Saturation Voltage				
$I_C = 10\ \text{mA}$, $I_B = 1\ \text{mA}$ (pulse test)	$V_{CE(sat)1}$	---	0.3	V dc
$I_C = 50\ \text{mA}$, $I_B = 5\ \text{mA}$ (pulse test)	$V_{CE(sat)2}$	---	0.6	V dc
Base-Emitter Saturation Voltage				
$I_C = 10\ \text{mA}$, $I_B = 1.0\ \text{mA}$ (pulse test)	$V_{BE(sat)1}$	---	0.8	V dc
$I_C = 50\ \text{mA}$, $I_B = 5\ \text{mA}$ (pulse test)	$V_{BE(sat)2}$	0.65	0.9	V dc

Switching Characteristics	Symbol	Min	Max	Unit
Pulse Delay Time Per Figure 3 of MIL-S-19500/357				
	t_d	---	100	ns
Pulse Rise Time $I_C = 500\ \text{mA}$, $I_{B1} = 50\ \text{mA}$, $V_{EB} = 2\ \text{V}$				
	t_r	---	100	ns
Pulse Storage Time $I_C = 500\ \text{mA}$, $I_{B1} = I_{B2} = 50\ \text{mA}$				
	t_s	---	500	ns
Pulse Fall Time $I_C = 500\ \text{mA}$, $I_{B1} = I_{B2} = 50\ \text{mA}$				
	t_f	---	150	ns
t off $I_C = 500\ \text{mA}$, $I_{B1} = I_{B2} = 50\ \text{mA}$				
	t_{off}	---	600	ns

Small Signal Characteristics	Symbol	Min	Max	Unit
Short Circuit Forward Current Transfer Ratio $V_{CE} = 30 \text{ V}, I_C = 30 \text{ mA}, f = 100 \text{ MHz}$	$ h_{FE} $	1.5	8.0	---
Short Circuit Forward Current Transfer Ratio $V_{CE} = 10 \text{ V}, I_C = 10 \text{ mA}, f = 1 \text{ kHz}$	h_{FE}	40	160	---
Short-Circuit Input Impedance $V_{CE} = 10 \text{ V}, I_C = 10 \text{ mA}, f = 1 \text{ kHz}$	h_{IE}	100	600	ohms
Open-Circuit, Reverse Voltage Transfer Ratio $V_{CE} = 10 \text{ V}, I_C = 10 \text{ mA}, f = 1 \text{ kHz}$	h_{RE}	---	3×10^{-4}	---
Open Circuit Output Admittance $V_{CE} = 10 \text{ V}, I_C = 10 \text{ mA}, f = 1 \text{ kHz}$	h_{oe}	---	200	μS
Open Circuit Output Capacitance $V_{CB} = 20 \text{ V}, I_E = 0, 100 \text{ kHz} < f < 1 \text{ MHz}$	C_{OBO}	---	10	pF
Input Capacitance, Output Open Circuited $V_{EB} = 1 \text{ V}, I_C = 0, 100 \text{ kHz} < f < 1 \text{ MHz}$	C_{IBO}	---	75	pF
Noise Figure $V_{CE} = 10 \text{ V}, I_C = 0.5 \text{ mA}, R_g = 1 \text{ kohm}$				
$f = 100 \text{ Hz}$	NF	---	5	dB
$f = 1 \text{ kHz}$	NF	---	3	dB
$f = 10 \text{ kHz}$	NF	---	3	dB