



Data Sheet No. 2N3468L

Type 2N3468L**Geometry 6706****Polarity PNP****Qual Level: JAN - JANTXV****Generic Part Number:
2N3468****REF: MIL-PRF-19500/348****Features:**

- General-purpose transistor for switching and amplifier applications.
- Housed in a [TO-5](#) case.
- Also available in chip form using the 6706 chip geometry.
- The Min and Max limits shown are per [MIL-PRF-19500/348](#) which Semicoa meets in all cases.

[Request Quotation](#)

TO-5

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

Rating	Symbol	Rating	Unit
Collector-Emitter Voltage	V_{CEO}	50	V
Collector-Base Voltage	V_{CBO}	50	V
Emitter-Base Voltage	V_{EBO}	5.0	V
Collector Current, Continuous	I_C	1.0	mA
Operating Junction Temperature	T_J	-55 to +175	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55 to +175	$^{\circ}\text{C}$

Electrical Characteristics

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

OFF Characteristics	Symbol	Min	Max	Unit
Collector-Base Breakdown Voltage $I_C = 10\ \mu\text{A}$	$V_{(BR)CBO}$	50	---	V
Collector-Emitter Breakdown Voltage $I_C = 10\ \text{mA}$	$V_{(BR)CEO}$	50	---	V
Emitter-Base Breakdown Voltage $I_E = 10\ \mu\text{A}$, pulsed	$V_{(BR)EBO}$	5.0	---	V
Collector-Base Cutoff Current $V_{CB} = 30\ \text{V}$	I_{CBO1}	---	100	nA
$V_{CB} = 30\ \text{V}$, $T_A = +150^{\circ}\text{C}$	I_{CBO2}	---	50	μA
Collector-Emitter Cutoff Current $V_{EB} = 3.0\ \text{V}$, $V_{CE} = 30\ \text{V}$	I_{CEX}	---	100	nA

ON Characteristics	Symbol	Min	Max	Unit
Forward current Transfer Ratio				
$I_C = 150\ \text{mA}$, $V_{CE} = 1.0\ \text{V}$ (pulse test)	h_{FE1}	25	---	---
$I_C = 500\ \text{mA}$, $V_{CE} = 1.0\ \text{V}$ (pulse test)	h_{FE2}	25	75	---
$I_C = 1.0\ \text{A}$, $V_{CE} = 5\ \text{V}$ (pulse test)	h_{FE3}	25	---	---
$I_C = 150\ \text{mA}$, $V_{CE} = 1.0\ \text{V}$ (pulse test), $T = -55^{\circ}\text{C}$	h_{FE4}	10	---	---
Collector-Emitter Saturation Voltage				
$I_C = 150\ \text{mA}$, $I_B = 15\ \text{mA}$ (pulse test)	$V_{CE(sat)1}$	---	0.35	V dc
$I_C = 500\ \text{mA}$, $I_B = 50\ \text{mA}$ (pulse test)	$V_{CE(sat)2}$	---	0.6	V dc
$I_C = 1.0\ \text{A}$, $I_B = 100\ \text{mA}$ (pulse test)	$V_{CE(sat)3}$	---	1.2	V dc
Base-Emitter Saturation Voltage				
$I_C = 150\ \text{mA}$, $I_B = 15\ \text{mA}$ (pulse test)	$V_{BE(sat)1}$	---	1.0	V dc
$I_C = 500\ \text{mA}$, $I_B = 50\ \text{mA}$ (pulse test)	$V_{BE(sat)2}$	0.8	1.2	V dc
$I_C = 1.0\ \text{A}$, $I_B = 100\ \text{mA}$ (pulse test)	$V_{BE(sat)3}$	---	1.6	V dc

Small Signal Characteristics	Symbol	Min	Max	Unit
Extrapolated Unity Gain Frequency $V_{CE} = 10\ \text{V}$, $I_C = 50\ \text{mA}$, $f = 100\ \text{MHz}$	f_t	150	500	MHz
Open Circuit Output Capacitance $V_{CB} = 10\ \text{V}$, $I_E = 0$, $100\ \text{kHz} < f < 1\ \text{MHz}$	C_{OBO}	---	25	pF
Input Capacitance, Output Open Circuited $V_{EB} = 0.5\ \text{V}$, $I_C = 0$, $100\ \text{kHz} < f < 1\ \text{MHz}$	C_{IBO}	---	100	pF

Switching Characteristics	Symbol	Min	Max	Unit
Delay Time $I_C = 500\ \text{mA}$, $I_{B1} = 50\ \text{mA}$, $V_{EB} = 2\ \text{V}$	t_d	---	10	ns
Rise Time $I_C = 500\ \text{mA}$, $I_{B1} = 50\ \text{mA}$, $V_{EB} = 2\ \text{V}$	t_r	---	30	ns
Storage Time $I_C = 500\ \text{mA}$, $I_{B1} = I_{B2} = 50\ \text{mA}$	t_s	---	60	ns
Fall Time $I_C = 500\ \text{mA}$, $I_{B1} = I_{B2} = 50\ \text{mA}$	t_f	---	30	ns