

**Type 2N3468**  
**Geometry 6706**  
**Polarity PNP**  
**Qual Level: JAN - JANTXV**

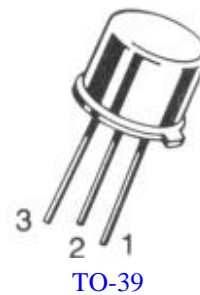
**Generic Part Number:**  
**2N3468**

**REF: MIL-PRF-19500/348**

**Features:**

[Request Quotation](#)

- General-purpose transistor for switching and amplifier applications.
- Housed in a [TO-39](#) 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.



**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	$\mu\text{A}$
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
<b>Forward current Transfer Ratio</b>				
$I_C = 150\ \text{mA}$ , $V_{CE} = 1.0\ \text{V}$ (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	---	---
<b>Collector-Emitter Saturation Voltage</b>				
$I_C = 150\ \text{mA}$ , $I_B = 15\ \text{mA}$ (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
<b>Base-Emitter Saturation Voltage</b>				
$I_C = 150\ \text{mA}$ , $I_B = 15\ \text{mA}$ (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