# imall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# TECHNICAL DATA

TO-39\* (TO-205AD) 2N3467, 2N3468

TO-5\*

2N3467L, 2N3468L

\*See appendix A for package outline

## PNP SILICON SWITCHING TRANSISTOR

Qualified per MIL-PRF-19500/348

Devices		Qualified Level
2N3467 2N3467L	2N3468 2N3468L	JAN JANTX JANTXV

Symbol	2N3467 2N3467L	2N3468 2N3468L	Unit
V <sub>CEO</sub>	40	50	Vdc
V <sub>CBO</sub>	40	50	Vdc
V <sub>EBO</sub>	5.0		Vdc
I <sub>C</sub>	5.0		Adc
р	1.0 5.0		W
г <sub>Т</sub>			W
T <sub>op</sub> , T <sub>stg</sub>	g -55 to +175		<sup>0</sup> C
	$V_{CEO}$ $V_{CBO}$ $V_{EBO}$ $I_{C}$ $P_{T}$	$\begin{tabular}{ c c c c c } \hline Symbol & $2N3467L$ \\ \hline $V_{CEO}$ & $40$ \\ \hline $V_{CBO}$ & $40$ \\ \hline $V_{CBO}$ & $5$ \\ \hline $I_C$ & $1$ \\ \hline $P_T$ & $1$ \\ \hline $P_T$ & $1$ \\ \hline $5$ \hline $5$ \\ \hline $5$ \hline $5$ \\ \hline $5$ \hline $5$ \\ \hline $5$ \hline $5$ \hline $5$ \\ \hline $5$ \hline $5$ \hline $5$ \hline $5$ \hline \hline $5$ $	$\begin{tabular}{ c c c c c c } \hline Symbol & 2N3467L & 2N3468L \\ \hline $V_{CEO}$ & 40 & 50 \\ \hline $V_{CBO}$ & 40 & 50 \\ \hline $V_{CBO}$ & 5.0 \\ \hline $I_C$ & 1.0 \\ \hline $P_T$ & $1.0 \\ $5.0$ \\ \hline $F_T$ & $5.0$ \\ \hline \hline $F_T$ & $5.0$ \\ \hline $F_T$ & $5.0$ \\ \hline \hline \hline \hline \hline \hline $F_T$ & $5.0$ \\ \hline \hline \hline \hline \hline \hline \hline$

1) Derate linearly 5.71 mW/ $^{\circ}$ C for T<sub>A</sub> > +25 $^{\circ}$ C

2) Derate linearly 28.6 mW/ $^{0}$ C for T<sub>C</sub> > +25 $^{0}$ C

#### **ELECTRICAL CHARACTERISTICS**

Characteristics		Symbol	Min.	Max.	Unit
OFF CHARACTERISTICS					
Collector-Emitter Breakdown Current					
$I_{\rm C} = 10  \rm mAdc$	2N3467, L	V <sub>(BR)CBO</sub>	40		Vdc
	2N3468, L		50		
Emitter-Base Breakdown Current		V			Vdc
$I_E = 10 \ \mu Adc$		V <sub>(BR)EBO</sub>	5.0		vac
Collector-Emitter Breakdown Current					
$I_C = 10 \text{ mAdc}$	2N3467, L	V <sub>(BR)CEO</sub>	40		Vdc
	2N3468, L		50		
Collector-Base Cutoff Current		т			m A Ja
$V_{CB} = 30 \text{ Vdc}$		I <sub>CBO</sub>		100	ηAdc
Collector-Emitter Cutoff Current		т		100	nAdc
$V_{EB} = 3.0 \text{ Vdc}, V_{CE} = 30$		I <sub>CEX</sub>		100	IIAuc

#### 2N3467, L, 2N3468, L, JAN SERIES

### ELECTRICAL CHARACTERISTICS (con't)

Characteristics		Symbol	Min.	Max.	Unit	
<b>ON CHARACTERIS</b>	STICS (3)					
Forward-Current Trans	fer Ratio					
$I_C$ =150 mAdc, $V_{CE}$ =	= 1.0 Vdc	2N3467, L		40		
		2N3468, L		25		
$I_C = 500 \text{ mAdc}, V_{CE}$	= 1.0 Vdc	2N3467, L	$h_{FE}$	40	120	
		2N3468, L		25	75	
$I_{C} = 1.0 \text{ Adc}, V_{CE} = 3$	5.0 Vdc	2N3467, L		10		
$10 - 1.0$ Mae, $V_{\rm E} = 10$	5.0 <b>v</b> de	2N3468, L		40 25		
Collector-Emitter Satur	ration Voltage	2110 100, 2		25		
$I_C = 150 \text{ mAdc}, I_B =$	-		V <sub>CE(sat)</sub>		0.35	
$I_{\rm C} = 500 \text{ mAdc}, I_{\rm B} = 100 \text{ mAdc}$			CE(Sur)		0.6	Vdc
$I_{\rm C} = 1.0$ Adc, $I_{\rm B} = 10$				1.2		
Base-Emitter Saturatio						
$I_{C} = 150 \text{ mAdc}, I_{B} =$	15 mAdc				1.0	Vdc
$I_{\rm C} = 500 \text{ mAdc}, I_{\rm B} = 100 \text{ mAdc}$	$I_{\rm C} = 500 \text{ mAdc}, I_{\rm B} = 50 \text{ mAdc}$		V <sub>BE(sat)</sub>	0.8	1.2	vuc
$I_{\rm C} = 1.0 \text{ Adc}, I_{\rm B} = 10$	0 mAdc				1.6	
DYNAMIC CHARA	CTERISTICS					
Output Capacitance			C <sub>obo</sub>		25	pF
	, 100 kHz $\leq$ f $\leq$ 1.0 MHz	Z	Cobo		25	pi
Extrapolated Unity Gai	· ·					
$I_{C} = 50 \text{ mAdc}, V_{CE} = 1$	0  Vdc,  f = 100  NHz		$\mathbf{f}_{t}$	175	500	MHz
		2N3467, L		175 150	500 500	
Input Capacitance		2N3468, L		150	300	
	0, 100 kHz $\le$ f $\le$ 1.0 MH	7	C <sub>ibo</sub>		100	pF
SWITCHING CHAP				1		
	$500 \text{ mAdc}, I_{B1} = 50 \text{ mAc}$	dc, $V_{EB} = 2$	ťd		10	ns
	$500 \text{ mAdc}, I_{B1} = 50 \text{ mAc}$	-	t r		30	ns
	$500 \text{ mAdc}, I_{B1} = I_{B2} = 50$		t s		60	ns
	00 mAdc, $I_{B1} = I_{B2} = 50$		<sup>t</sup> f		30	ns