



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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## PNP SILICON SMALL SIGNAL TRANSISTOR

Qualified per MIL-PRF-19500/392

### Devices

2N3485A

2N3486A

### Qualified Level

JAN  
JANTX  
JANTXV

### MAXIMUM RATINGS

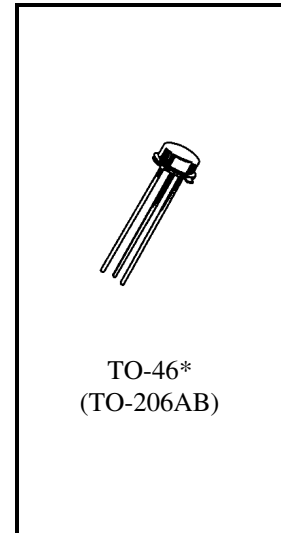
Ratings	Symbol	2N3485A 2N3486A	Unit
Collector-Emitter Voltage	$V_{CEO}$	60	Vdc
Collector-Base Voltage	$V_{CBO}$	60	Vdc
Emitter-Base Voltage	$V_{EBO}$	5.0	Vdc
Collector Current -- Continuous	$I_C$	600	mAdc
Total Power Dissipation	$P_T$	@ $T_A = +25^{\circ}\text{C}^{(1)}$	0.4
		@ $T_C = +25^{\circ}\text{C}^{(2)}$	2.0
Operating & Storage Junction Temperature Range	$T_J, T_{stg}$	-55 to +200	$^{\circ}\text{C}$

### THERMAL CHARACTERISTICS

Characteristics	Symbol	Max.	Unit
Thermal Resistance Junction-to-Ambient	$R_{\theta JA}$	0.439	$^{\circ}\text{mC/W}$
Junction-to-Case	$R_{\theta JC}$	87	$^{\circ}\text{C/W}$

1) Derate linearly 2.28 mW/ $^{\circ}\text{C}$  above  $T_A = +25^{\circ}\text{C}$

2) Derate linearly 11.43 mW/ $^{\circ}\text{C}$  above  $T_C = +25^{\circ}\text{C}$



\*See appendix A for package outline

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

Characteristics	Symbol	Min.	Max.	Unit
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### OFF CHARACTERISTICS

Collector-Emitter Breakdown Voltage $I_C = 10 \text{ mAdc}$	$V_{(BR)CEO}$	60		Vdc
Collector-Base Cutoff Current $V_{CB} = 50 \text{ Vdc}$ $V_{CB} = 60 \text{ Vdc}$	$I_{CBO}$		10 10	$\eta\text{Adc}$ $\mu\text{Adc}$
Emitter-Base Cutoff Current $V_{EB} = 3.5 \text{ Vdc}$ $V_{EB} = 5.0 \text{ Vdc}$	$I_{EBO}$		50 10	$\eta\text{Adc}$ $\mu\text{Adc}$

**2N3485A, 2N3486A JAN SERIES**

**ELECTRICAL CHARACTERISTICS (con't)**

Characteristics	Symbol	Min.	Max.	Unit
<b>ON CHARACTERISTICS <sup>(3)</sup></b>				
Forward-Current Transfer Ratio I <sub>C</sub> = 0.1 mA <sub>dc</sub> , V <sub>CE</sub> = 10 V <sub>dc</sub>	h <sub>FE</sub>	2N3485A 40		
		2N3486A 75		
I <sub>C</sub> = 1.0 mA <sub>dc</sub> , V <sub>CE</sub> = 10 V <sub>dc</sub>		2N3485A 40		
		2N3486A 100		
I <sub>C</sub> = 10 mA <sub>dc</sub> , V <sub>CE</sub> = 10 V <sub>dc</sub>		2N3485A 40		
		2N3486A 100		
I <sub>C</sub> = 150 mA <sub>dc</sub> , V <sub>CE</sub> = 10 V <sub>dc</sub>	2N3485A 40	120		
	2N3486A 100	300		
I <sub>C</sub> = 500 mA <sub>dc</sub> , V <sub>CE</sub> = 10 V <sub>dc</sub>	2N3485A 40			
	2N3486A 50			
Collector-Emitter Saturation Voltage I <sub>C</sub> = 150 mA <sub>dc</sub> , I <sub>B</sub> = 15 mA <sub>dc</sub> I <sub>C</sub> = 500 mA <sub>dc</sub> , I <sub>B</sub> = 50 mA <sub>dc</sub>	V <sub>CE(sat)</sub>		0.4 1.6	V <sub>dc</sub>
Base-Emitter Saturation Voltage I <sub>C</sub> = 150 mA <sub>dc</sub> , I <sub>B</sub> = 15 mA <sub>dc</sub> I <sub>C</sub> = 500 mA <sub>dc</sub> , I <sub>B</sub> = 50 mA <sub>dc</sub>	V <sub>BE(sat)</sub>		1.3 2.6	V <sub>dc</sub>

**DYNAMIC CHARACTERISTICS**

Small-Signal Forward Current Transfer Ratio I <sub>C</sub> = 1.0 mA <sub>dc</sub> , V <sub>CE</sub> = 10 V <sub>dc</sub> , f = 1.0 kHz	h <sub>fe</sub>	2N3485A 40 2N3486A 100		
Magnitude of Small-Signal Forward Current Transfer Ratio I <sub>C</sub> = 50 mA <sub>dc</sub> , V <sub>CE</sub> = 20 V <sub>dc</sub> , f = 100 MHz	h <sub>fe</sub>		2.0	10
Output Capacitance V <sub>CB</sub> = 10 V <sub>dc</sub> , I <sub>E</sub> = 0, 100 kHz ≤ f ≤ 1.0 MHz	C <sub>obo</sub>			8.0 pF
Input Capacitance V <sub>EB</sub> = 2.0 V <sub>dc</sub> , I <sub>C</sub> = 0, 100 kHz ≤ f ≤ 1.0 MHz	C <sub>ibo</sub>			30 pF

(3) Pulse Test: Pulse Width = 300μs, Duty Cycle ≤ 2.0%.