



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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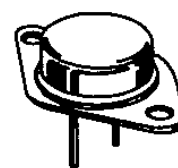


**PNP DARLINGTON POWER SILICON TRANSISTOR**
*Qualified per MIL-PRF-19500/ 505*
**Devices**
**2N6286**
**2N6287**
**Qualified Level**
**JANTX  
JANTXV**
**MAXIMUM RATINGS**

Ratings	Symbol	2N6286	2N6287	Unit
Collector-Emitter Voltage	$V_{CEO}$	-80	-100	Vdc
Collector-Base Voltage	$V_{CBO}$	-80	-100	Vdc
Emitter-Base Voltage	$V_{EBO}$	-7.0		Vdc
Base Current	$I_B$	-0.5		Adc
Collector Current	$I_C$	-20		Adc
Total Power Dissipation <sup>(1)</sup>	@ $T_C = +25^{\circ}\text{C}$ @ $T_C = +100^{\circ}\text{C}$	175		W
		87.5		W
Operating & Storage Junction Temperature Range	$T_{op}, T_{stg}$	-65 to +175		$^{\circ}\text{C}$

**THERMAL CHARACTERISTICS**

Characteristics	Symbol	Max.	Unit
Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	0.857	$^{\circ}\text{C/W}$

1) Derate linearly @ 1.17 W/ $^{\circ}\text{C}$  above  $T_C > +25^{\circ}\text{C}$ 


TO-3\*  
(TO-204AA)

\*See appendix A for  
package outline

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

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

Collector-Emitter Breakdown Voltage $I_C = -100 \text{ mAdc}$	2N6286 2N6287	$V_{(BR)CEO}$	-80 -100	Vdc
Collector-Emitter Cutoff Current $V_{CE} = -40 \text{ Vdc}$ $V_{CE} = -50 \text{ Vdc}$	2N6286 2N6287	$I_{CEO}$	-1.0 -1.0	mAdc
Collector-Emitter Cutoff Current $V_{CE} = -80 \text{ Vdc}, V_{BE} = 1.5 \text{ Vdc}$ $V_{CE} = -100 \text{ Vdc}, V_{BE} = 1.5 \text{ Vdc}$	2N6286 2N6287	$I_{CEX}$	-0.5 -0.5	mAdc
Emitter-Base Cutoff Current $V_{EB} = -7.0 \text{ Vdc}$		$I_{EBO}$	-2.5	Adc

**2N6286, 2N6287 JAN SERIES**

**ELECTRICAL CHARACTERISTICS (con't)**

Characteristics	Symbol	Min.	Max.	Unit
<b>ON CHARACTERISTICS</b> <sup>(2)</sup>				
Forward-Current Transfer Ratio I <sub>C</sub> = -1.0 Adc, V <sub>CE</sub> = -3.0 Vdc I <sub>C</sub> = -10 Adc, V <sub>CE</sub> = -3.0 Vdc I <sub>C</sub> = -20 Adc, V <sub>CE</sub> = -3.0 Vdc	h <sub>FE</sub>	1,500 1,250 300	18,000	
Collector-Emitter Saturation Voltage I <sub>C</sub> = -20 Adc, I <sub>B</sub> = -200 mAdc I <sub>C</sub> = -10 Adc, I <sub>B</sub> = -40 mAdc	V <sub>CE(sat)</sub>		-3.0 -2.0	Vdc
Base-Emitter Saturation Voltage I <sub>C</sub> = -20 Adc, I <sub>B</sub> = -200 mAdc	V <sub>BE(sat)</sub>		-4.0	Vdc
Base-Emitter Voltage I <sub>C</sub> = -10 Adc, V <sub>CE</sub> = -3.0 Vdc	V <sub>BE(on)</sub>		-2.8	Vdc

**DYNAMIC CHARACTERISTICS**

Magnitude of Common Emitter Small-Signal Short-Circuit Forward Current Transfer Ratio I <sub>C</sub> = -10 Adc, V <sub>CE</sub> = -3.0 Vdc f = 1.0 MHz	h <sub>fe</sub>	8.0	80	
Small-Signal Short-Circuit Forward Current Transfer Ratio I <sub>C</sub> = -10 Adc, V <sub>CE</sub> = -3.0 Vdc	h <sub>fe</sub>	300		
Output Capacitance V <sub>CB</sub> = -10 Vdc, I <sub>E</sub> = 0, 100 kHz ≤ f ≤ 1.0 MHz	C <sub>obo</sub>		400	pF

**SWITCHING CHARACTERISTICS**

Turn-On Time V <sub>CC</sub> = -30 Vdc; I <sub>C</sub> = -10 Adc; I <sub>B</sub> = -40 mAdc	t <sub>on</sub>		2.0	μs
Turn-Off Time V <sub>CC</sub> = -30 Vdc; I <sub>C</sub> = -10 Adc; I <sub>B1</sub> = I <sub>B2</sub> = -40 mAdc	t <sub>off</sub>		10	μs

**SAFE OPERATING AREA**

<b>DC Tests</b> T <sub>C</sub> = +25°C, 1 Cycle, t = 1.0 s				
<b>Test 1</b> V <sub>CE</sub> = -8.75 Vdc, I <sub>C</sub> = -20 Adc                      All Types				
<b>Test 2</b> V <sub>CE</sub> = -30 Vdc, I <sub>C</sub> = -5.8 Adc                      All Types				
<b>Test 3</b> V <sub>CE</sub> = -80 Vdc, I <sub>C</sub> = -100 mAdc                      2N6286				
V <sub>CE</sub> = -100 Vdc, I <sub>C</sub> = -100 mAdc                      2N6287				

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