NEW

PNP Darlington Power Silicon Transistor

2N6286 & 2N6287

AEROFLEX
A passion for performance.

Features

- Available in JANTX, and JANTXV per MIL-PRF-19500/505
- TO-3 (TO-204AA) Package

Maximum Ratings

Ratings	Symbol	2N6286	2N6287	Units
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 @ T_A = +25 °C (1) @ T_C = +100 °C	P_T	175 87.5		W W
Operating & Storage Junction Temperature Range	T_{op}, T_{stg}	-65 to +175		°C

1) Derate linearly @ 1.17 mW / °C for T_C > +25 °C

Thermal Characteristics

Characteristics	Symbol	Maximum	Units
Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	0.857	°C/W

Electrical Characteristics

OFF Characteristics		Symbol	Mimimum	Maximum	Units
Collector - Emitter Breakdown Voltage I_C = -100 mAdc	2N6286 2N6287	$V_{(BR)CEO}$	-80 -100	- - -	Vdc
Collector - Emitter Cutoff Current V_{CE} = -40 Vdc V_{CE} = -50 Vdc	 2N6286 2N6287	I_{CEO}	- - -	-1.0 -1.0	mAdc
Collector - Emitter Cutoff Current V_{CE} = -80 Vdc, V_{BE} = 1.5 Vdc V_{CE} = -100 Vdc, V_{BE} = 1.5 Vdc	 2N6286 2N6287	I_{CEX}	- - -	-0.5 -0.5	mAdc
Emitter - Base Cutoff Current V_{EB} = -7.0 Vdc		I_{EBO}	- - -	-2.0	mAdc

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METELICS

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Electrical Characteristics -con't

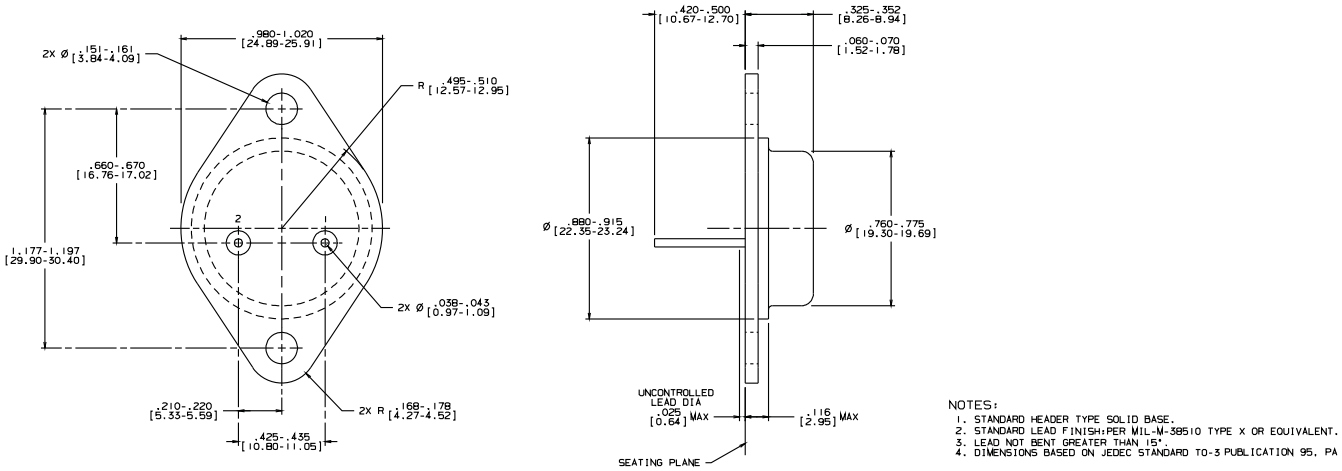
ON Characteristics (2)	Symbol	Mimimum	Maximum	Units
Forward Current Transfer Ratio	H_{FE}			
I_C = -1.0 Adc, V_{CE} = -3.0 Vdc		1,000		
I_C = -6.0 Adc, V_{CE} = -3.0 Vdc		1,000	18,000	
I_C = -12 Adc, V_{CE} = -3.0 Vdc		150		
Collector - Emitter Saturation Voltage	$V_{CE(sat)}$			
I_C = -20 Adc, I_B = -200 mAdc		- - -	-3.0	Vdc
I_C = -10.0 Adc, I_B = -40 mAdc		- - -	-2.0	
Base - Emitter Saturation Voltage	$V_{BE(sat)}$			
I_C = -20 Adc, I_B = -200 mAdc		- - -	-4.0	Vdc
Base - Emitter Voltage	$V_{BE(sat)}$			
I_C = -10.0 Adc, I_B = -3.0 Adc		- - -	-2.8	Vdc
DYNAMIC Characteristics				
Magnitude of Common Emitter Small-Signal Short-Circuit Forward Current Transfer Ratio	$\lvert h_{fe} \rvert$	8.0	80	
I_C = -10 Adc, V_{CE} = -3.0 Vdc, f = 1.0 MHz				
Small-Signal Short-Circuit Forward Current Transfer Ratio	h_{fe}	300	- - -	
I_C = -10 Adc, V_{CE} = -3.0 Vdc				
Output Capacitance	C_{obo}	- - -	400	pF
V_{CB} = -10 Vdc, I_E = 0, 100 kHz $\leq$ f $\leq$ 1.0 MHz				
Switching Characteristic				
Turn-On Time	t_{on}	- - -	2.0	µs
V_{CC} = -30 Vdc, I_C = -10 Adc, I_B = -40 mAdc				
Tum-Off Time	t_{off}	- - -	10	µs
V_{CC} = -30 Vdc, I_C = -10 Adc, I_B = -40 mAdc				

SAFE OPERATING AREA

DC Tests:	T_C = +25 °C, I Cycle, t = 1.0 s	
Test 1:	V_{CE} = -8.75 Vdc, I_C = -20 Adc	All Types
Test 2:	V_{CE} = -30.0 Vdc, I_C = -5.8 Adc	All Types
Test 3:	V_{CE} = -80.0 Vdc, I_C = -100 mAdc	2N6286
	V_{CE} = -100.0 Vdc, I_C = -100 mAdc	2N6287

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

Outline Drawing



NOTES:
1. STANDARD HEADER TYPE SOLID BASE.
2. STANDARD LEAD FINISH: PER MIL-M-38510 TYPE X OR EQUIVALENT.
3. LEAD NOT BENT GREATER THAN 15°.
4. DIMENSIONS BASED ON JEDEC STANDARD TO-3 PUBLICATION 95, PA

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A passion for performance.

Our passion for performance is defined by three attributes represented by these three icons: solution-minded, performance-driven and customer-focused.

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