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.

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NPN Darlington Power Silicon Transistor

NEW

2N6283 & 2N6284

AEROFLEX
A passion for performance.

Features

- Available in JAN, JANTX, and JANTXV per MIL-PRF-19500/504
- TO-3 (TO-204AA) Package

Maximum Ratings

Ratings	Symbol	2N6283	2N6284	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_A = +100 °C	P_T	175 87.5		W W
Operating & Storage Temperature Range	T_{op}, T_{stg}	-65 to +200°C		

Thermal Characteristics

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

1) Derate linearly @ 1.0 mW/°C for T_A > +25°C

Electrical Characteristics

OFF Characteristics		Symbol	Mimimum	Maximum	Units
Collector - Emitter Breakdown Voltage I_C = 100 mAdc	2N6283 2N6284	$V_{(BR)CEO}$	80 100	- - -	Vdc
Collector - Emitter Cutoff Current V_{CE} = 40 Vdc V_{CE} = 50 Vdc	2N6283 2N6284	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	2N6283 2N6284	I_{CEX}	- - -	0.01 0.01	mAdc
Emitter - Base Cutoff Current V_{EB} = 7.0 Vdc		I_{EBO}	- - -	2.5	mAdc

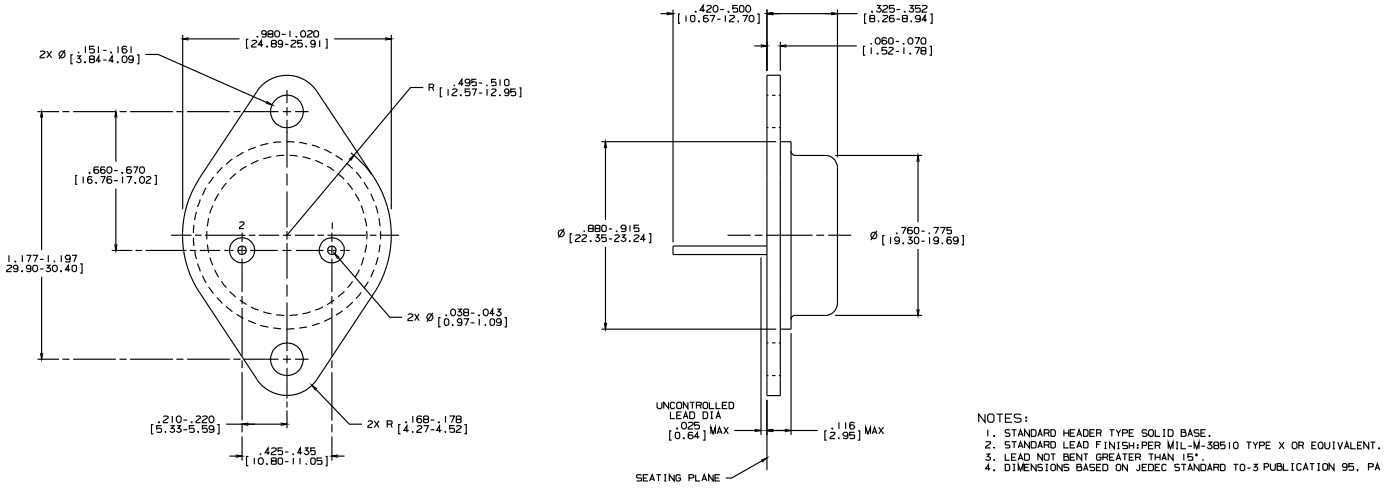
AEROFLEX
METELICS

Electrical Characteristics -con't

ON Characteristics (2)	Symbol	Minimum	Maximum	Unit
Forward Current Transfer Ratio I_C = 1.0 Adc, V_{CE} = 3.0 Vdc I_C = 10.0 Adc, V_{CE} = 3.0 Vdc I_C = 20.0 Adc, V_{CE} = 3.0 Vdc	H_{FE}	 1,500 1,250 500	 18,000	
Collector - Emitter Saturation Voltage I_C = 20.0 Adc, I_B = 200 mAdc I_C = 10.0 Adc, I_B = 40 mAdc	$V_{CE(sat)}$	- - -	3.0 2.0	Vdc
Base - Emitter Saturation Voltage I_C = 20.0 Adc, I_B = 200 mAdc	$V_{BE(sat)}$	- - -	4.0	Vdc
Base - Emitter Voltage I_C = 10.0 Adc, I_B = 3.0 Vdc	V_{BE}	- - -	2.8	Vdc
DYNAMIC Characteristic				
Magnitude of Common Emitter Small-Signal Short-Circuit Forward Current Transfer Ratio I_C = 10.0 Adc, V_{CE} = 3.0 Vdc, f = 1.0 kHz	$\lvert h_{fe} \rvert$	8.0	80	
Small-Signal Short-Circuit Forward Current Transfer Ratio I_C = 10.0 Adc, V_{CE} = 3.0 Vdc, f = 1.0 kHz	h_{fe}	700	- - -	
Output Capacitance V_{CB} = 10 Vdc, I_E = 0, 100 kHz $\leq$ f $\leq$ 1.0 MHz	C_{obo}	- - -	350	pF
Switching Characteristic				
Turn-On Time V_{CC} = 30 Vdc; I_C = 10.0 Adc; I_B = 40 mAdc	t_{on}	- - -	2.0	µs
Turn-Off Time V_{CC} = 30 Vdc; I_C = 10.0 Adc; I_{B1} = I_{B2} = 40 mAdc	t_{off}	- - -	10.0	µs
SAFE OPERATING AREA				
DC Tests:	T_C = +25 °C, 1 Cycle, t = 1.0 s			
Test 1:	V_{CE} = 8.75 Vdc, I_C = 20 Adc			
Test 2:	V_{CE} = 30 Vdc, I_C = 5.8 Adc			
Test 3:	V_{CE} = 80 Vdc, I_C = 100 mAdc			
	V_{CE} = 100 Vdc, I_C = 100 mAdc			

(2) Pulse Test: Pulse Width = 300 µs, Duty Cycle ≤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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AEROFLEX
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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