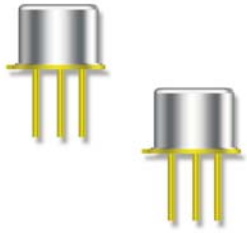
PNP Power Silicon Transistor
2N5679 & 2N5680

AEROFLEX
A passion for performance.

Features

- Available in JAN, JANTX and JANTXV per MIL-PRF-19500/582
- TO-39 (TO-205AD) Package



Maximum Ratings (T_A = 25°C unless otherwise noted)

Ratings	Symbol	2N5679	2N5680	Units
Collector - Emitter Voltage	V_{CEO}	100	120	Vdc
Collector - Base Voltage	V_{CBO}	100	120	Vdc
Emitter - Base Voltage	V_{EBO}	4.0	4.0	Vdc
Collector Current	I_C	1.0	1.0	Adc
Base Current	I_B	0.5	0.5	Adc
Total Power Dissipation @ T_A = +25 °C @ T_C = +100 °C	P_T	1.0 10.0	1.0 10.0	W W
Operating & Storage Temperature Range	T_{op}, T_{stg}	-65 to +200		°C

Thermal Characteristics

Characteristics	Symbol	Maximum	Unit
Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	7.0	°C/W

1) Derate linearly 5.7 mW/°C for T_A > +25 °C

2) Derate linearly 57 mW/°C for T_C > +25 °C

Electrical Characteristics (T_A = 25°C unless otherwise noted)

OFF Characteristics		Symbol	Mimimum	Maximum	Units
Collector - Emitter Breakdown Voltage I_C = 100 mAdc	2N5679 2N5680	$V_{(BR)CEO}$	60 80	- - -	Vdc
Collector - Emitter Cutoff Current V_{CE} = 40 Vdc V_{CE} = 60 Vdc	2N5679 2N5680	I_{CEO}	- - -	10 10	µAdc
Collector - Emitter Cutoff Current V_{CE} = 60 Vdc, V_{BE} = 1.5 Vdc V_{CE} = 80 Vdc, V_{BE} = 1.5 Vdc	2N5679 2N5680	I_{CEX}	- - -	300 300	nAdc
Collector - Base Cutoff Current V_{CB} = 60 Vdc V_{CB} = 80 Vdc	2N5679 2N5680	I_{CBO}	- - -	100 100	nAdc
Emitter - Base Cutoff Current V_{EB} = 7.0 Vdc		I_{EBO}	- - -	100	nAdc

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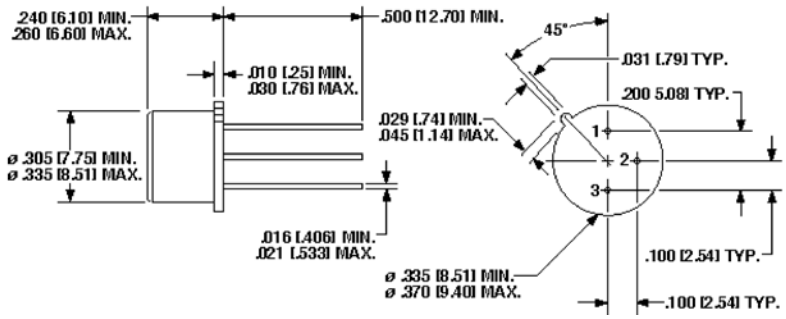
Electrical Characteristics -con't

ON Characteristics (1)	Symbol	Minimum	Maximum	Unit
Forward Current Transfer Ratio				
I_C = 250 mAdc, V_{CE} = 2.0 Vdc	H_{FE}	40	150	
I_C = 500 mAdc, V_{CE} = 2.0 Vdc		20		
I_C = 1.0 Adc, V_{CE} = 2.0 Vdc		5		
Collector - Emitter Saturation Voltage				
I_C = 250 mAdc, I_B = 25 mAdc	$V_{CE(sat)}$	- - -	0.6	Vdc
I_C = 500 mAdc, I_B = 50 mAdc		- - -	1.0	
Base - Emitter Voltage				
I_C = 250 mAdc, I_B = 25 mAdc	$V_{BE(on)}$	- - -	1.1	Vdc
I_C = 500 mAdc, I_B = 50 mAdc		- - -	1.3	
DYNAMIC Characteristics				
Magnitude of Common Emitter Small-Signal Short-Circuit Forward Current Transfer Ratio				
I_C = 0.1 Adc, V_{CE} = 1.5 Vdc, f = 10 MHz	$\lvert h_{fe} \rvert$	3.0		
Small-Signal Short-Circuit Forward Current Transfer Ratio				
I_C = 0.2 Adc, V_{CE} = 1.5 Vdc, f = 1.0 kHz	h_{fe}	40		
Output Capacitance				
V_{CB} = 20 Vdc, I_E = 0, f = 1.0 MHz	C_{obo}	- - -	50	pF
SAFE OPERATING AREA				
DC Tests:	T_C = +25 °C, 1 Cycle, t ≥ 0.5 s			
Test 1:	V_{CE} = 2.0 Vdc, I_C = 1.0 Adc			
Test 2:	V_{CE} = 10 Vdc, I_C = 1.0 Adc			
Test 3:	V_{CE} = 90 Vdc, I_C = 10 mAdc			

Outline Drawing



NOTE: Dimensions in Inches [mm]

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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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