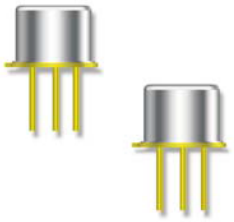
2N5679 & 2N5680

PNP Power Silicon Transistor

Rev. V1

Features

- JAN, JANTX, JANTXV, JANS, and JANSR 100K rads (si) per MIL-PRF-19500/560
- TO-39 (TO-205AD) Package



Electrical Characteristics

Parameter	Test Conditions	Symbol	Units	Min.	Max.
Off Characteristics					
Collector - Emitter Breakdown Voltage	I_C = 100 mAdc, 2N5679 I_C = 100 mAdc, 2N5680	$V_{(BR)CEO}$	Vdc	60 80	—
Collector - Emitter Cutoff Current	V_{CE} = 40 Vdc, 2N5679 V_{CE} = 60 Vdc, 2N5680	I_{CEO}	µAdc	—	10 10
Collector - Emitter Cutoff Current	V_{CE} = 60 Vdc, V_{BE} = 1.5 Vdc, 2N5679 V_{CE} = 80 Vdc, V_{BE} = 1.5 Vdc, 2N5679	I_{CEX}	nAdc	—	300 300
Collector - Base Cutoff Current	V_{CB} = 60 Vdc, 2N5679 V_{CB} = 60 Vdc, 2N5680	I_{CBO}	nAdc	—	100 100
Emitter - Base Cutoff Current	V_{EB} = 7.0 Vdc	I_{EBO}	nAdc	—	100
On Characteristics[1]					
Forward Current Transfer Ratio	I_C = 250 mAdc, V_{CE} = 2.0 Vdc I_C = 500 mAdc, V_{CE} = 2.0 Vdc I_C = 1.0 Adc, V_{CE} = 2.0 Vdc	H_{FE}	-	40 20 5	150 — —
Collector - Emitter Saturation Voltage	I_C = 250 mAdc, I_B = 25 mAdc I_C = 500 mAdc, I_B = 50 mAdc	$V_{CE(SAT)}$	Vdc	—	0.6 1.0
Emitter - Base Saturation Voltage	I_C = 250 mAdc, I_B = 25 mAdc I_C = 500 mAdc, I_B = 50 mAdc	$V_{BE(SAT)}$	Vdc	—	1.1 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	—
Small-Signal Short-Circuit Forward Current Transfer Radio	I_C = 0.2 Adc, V_{CE} = 1.5 Vdc, f = 1 kHz	H_{FE}	-	40	—
Output Capacitance	V_{CB} = 20 Vdc, I_E = 0, f = 1 MHz	C_{IBO}	pF	—	50
Safe Operating Area					
DC Tests: Test 1: Test 2: Test 3:	T_C = +25°C, I Cycle, t ≥ 0.5 s V_{CE} = 2 Vdc, I_C = 1 Adc V_{CE} = 10 Vdc, I_C = 1 Adc V_{CE} = 90 Vdc, I_C = 10 mAdc				

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Absolute Maximum Ratings

Ratings	Symbol	Value
Collector - Emitter Voltage 2N5679 2N5680	V_{CEO}	 100 Vdc 120 Vdc
Collector - Base Voltage 2N5679 2N5680	V_{CBO}	 100 Vdc 120 Vdc
Emitter - Base Voltage	V_{EBO}	4 Vdc
Base Current	I_B	0.5 Adc
Collector Current	I_C	1.0 Adc
Total Power Dissipation @ T_A = 25°C @ T_C = 100°C	P_T	 1 W 10 W
Operating & Storage Temperature Range	T_{OP}, T_{STG}	-65°C to +200°C

Thermal Characteristics

Characteristics	Symbol	Max. Value
Thermal Resistance, Junction to Case	$R_{\theta JC}$	7°C/W

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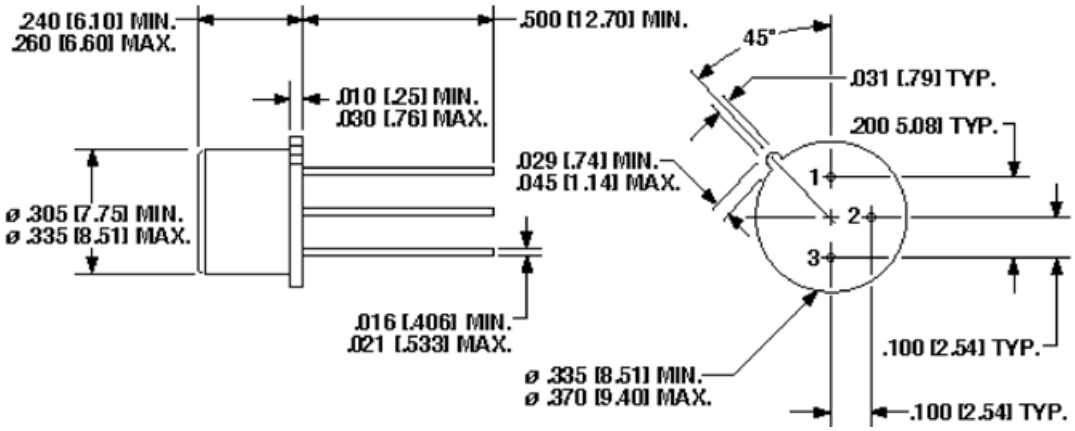
Outline Drawing



1. Dimensions are in inches [mm].