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	H _{FE}	-	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

 $\begin{array}{lll} \text{DC Tests:} & & & & & & & & & \\ \text{Test 1:} & & & & & & & \\ \text{Test 2:} & & & & & & \\ \text{Test 3:} & & & & & & \\ \end{array} \begin{array}{ll} & & & & & & \\ \text{T}_{\text{CE}} = 10 \text{ Vdc, I}_{\text{C}} = 1 \text{ Adc} \\ \text{V}_{\text{CE}} = 10 \text{ Vdc, I}_{\text{C}} = 1 \text{ Adc} \\ \text{V}_{\text{CE}} = 90 \text{ Vdc, I}_{\text{C}} = 10 \text{ mAdc} \\ \end{array}$

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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

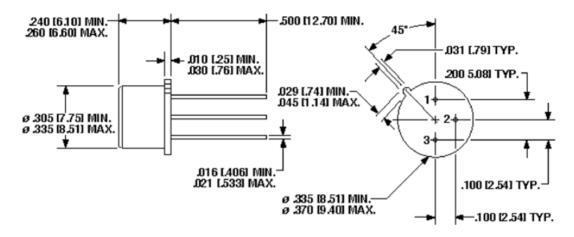
Characteristics	Symbol	Max. Value
Thermal Resistance, Junction to Case	$R_{ heta JC}$	7°C/W



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Outline Drawing



1. Dimensions are in inches [mm].

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