PNP Power Silicon Transistor

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 \text{ mAdc}, V_{CE} = 2.0 \text{ Vdc} \\ I_{C} = 500 \text{ mAdc}, V_{CE} = 2.0 \text{ Vdc} \\ I_{C} = 1.0 \text{ Adc}, V_{CE} = 2.0 \text{ 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	$I_{\rm C}$ = 250 mAdc, $I_{\rm B}$ = 25 mAdc $I_{\rm C}$ = 500 mAdc, $I_{\rm B}$ = 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	CIBO	pF	—	50		
Safe Operating Area							
$ \begin{array}{lll} \text{DC Tests:} & T_{\text{C}} = +25^{\circ}\text{C}, \ \text{I Cycle, } t \geq 0.5 \text{ s} \\ \text{Test 1:} & V_{\text{CE}} = 2 \ \text{Vdc, } I_{\text{C}} = 1 \ \text{Adc} \\ \text{Test 2:} & V_{\text{CE}} = 10 \ \text{Vdc, } I_{\text{C}} = 1 \ \text{Adc} \\ \text{Test 3:} & 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	Ι _Β	0.5 Adc
Collector Current	Ι _C	1.0 Adc
Total Power Dissipation (a) $T_A = 25^{\circ}C$ (b) $T_C = 100^{\circ}C$	PT	1 W 10 W
Operating & Storage Temperature Range	T_{OP}, T_{STG}	-65°C to +200°C

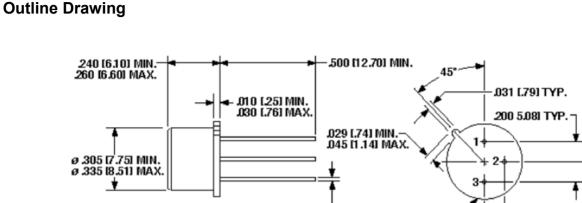
Thermal Characteristics

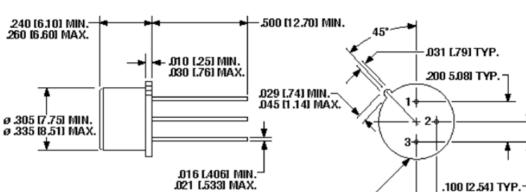
Characteristics	Symbol	Max. Value
Thermal Resistance, Junction to Case	$R_{ extsf{ heta}JC}$	7°C/W

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Ø .335 (8.51) MIN. ø .370 (9.40) MAX.

1. Dimensions are in inches [mm].



-.100 [2.54] TYP.

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