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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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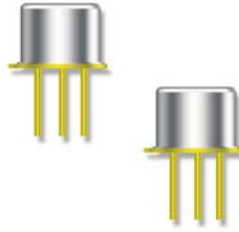
PNP Power Silicon Transistor

2N5679 & 2N5680



Features

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



Maximum Ratings ($T_A = 25^\circ\text{C}$ 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 @ $T_A = +25^\circ\text{C}$ @ $T_C = +100^\circ\text{C}$	P_T	1.0 10.0	1.0 10.0	W W
Operating & Storage Temperature Range	T_{op}, T_{stg}	-65 to +200		$^\circ\text{C}$

Thermal Characteristics

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

- 1) Derate linearly $5.7 \text{ mW}/^\circ\text{C}$ for $T_A > +25^\circ\text{C}$
- 2) Derate linearly $57 \text{ mW}/^\circ\text{C}$ for $T_C > +25^\circ\text{C}$

Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

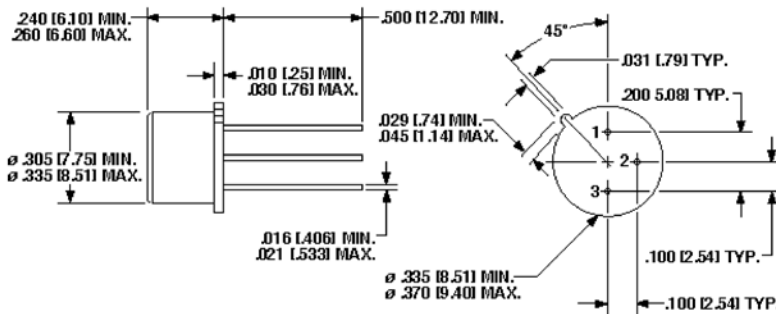
OFF Characteristics	Symbol	Mimimum	Maximum	Units
Collector - Emitter Breakdown Voltage $I_C = 100 \text{ mA}$ 2N5679 2N5680	$V_{(BR)CEO}$	60 80	---	Vdc
Collector - Emitter Cutoff Current $V_{CE} = 40 \text{ Vdc}$ $V_{CE} = 60 \text{ Vdc}$ 2N5679 2N5680	I_{CEO}	---	10 10	μAdc
Collector - Emitter Cutoff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



Electrical Characteristics -con't

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

Outline Drawing



NOTE: Dimensions in Inches [mm]

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