

TECHNICAL DATA  
DATA SHEET 5585, REV. -

## PNP Transistor Array with Base Resistors

- **Quad PNP transistors in Ceramic LCC-20 package**
- **Each transistor equivalent to 2N2907**
- **Alternate base resistors available (contact factory for options)**
- **External connection option for base resistor flexibility and full testability**

### MAX. RATINGS FOR TRANSISTOR

All rating at are  $T_A = 25^\circ\text{C}$  unless otherwise specified

RATING	CONDITIONS	MIN.	TYP.	MAX.	UNITS
Collector-Emitter Voltage ( $V_{CE0}$ )	-	-	-	-60	Vdc
Collector-Base Voltage ( $V_{CBO}$ )	-	-	-	-60	Vdc
Emitter-Base Voltage ( $V_{EBO}$ )	-	-	-	-5.0	Vdc
Collector Current-Continuous ( $I_C$ ) (subject to Ceramic $T_c < 65^\circ\text{C}$ )	-	-	-	-0.6	Adc
Total Power Dissipation $P_T$ @ $T_C = 25^\circ\text{C}$ ; Derate above $25^\circ\text{C}$	-	-	-	625 5	mW mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Case ( $R_{\theta JC}$ ) Per Transistor	-	-	-	200	$^\circ\text{C/W}$
Operating Junction and Storage Temp. ( $T_J$ & $T_{stg}$ )	-	-65	-	+150	$^\circ\text{C}$

### ELECTRICAL CHARACTERISTICS

All rating at are  $T_A = 25^\circ\text{C}$  unless otherwise specified

OFF CHARACTERISTICS					
Collector to Base Cutoff current $I_{CBO1}$	$V_{CB} = -60\text{V}$	-	-	-10	$\mu\text{A}$
Collector current, Emitter to Base $I_{EBO1}$	$V_{EB} = -5\text{V}$	-	-	-10	$\mu\text{A}$
Breakdown Voltage, Collector to Emitter $V_{(BR)CEO}$	$I_C = -10\text{mA}$	-60	-	-	V
Collector to Emitter cutoff current $I_{CES}$	$V_{CE} = -50\text{V}$	-	-	-50	nA
Collector to Base cutoff current $I_{CBO2}$	$V_{CB} = -50\text{V}$	-	-	-10	nA
Emitter to Base cutoff current $I_{EBO2}$	$V_{EB} = -4\text{V}$	-	-	-50	nA
Collector to Base Cutoff current $I_{CBO3}$	$V_{CB} = -50\text{V}, T_A = 150^\circ\text{C}$	-	-	-10	$\mu\text{A}$

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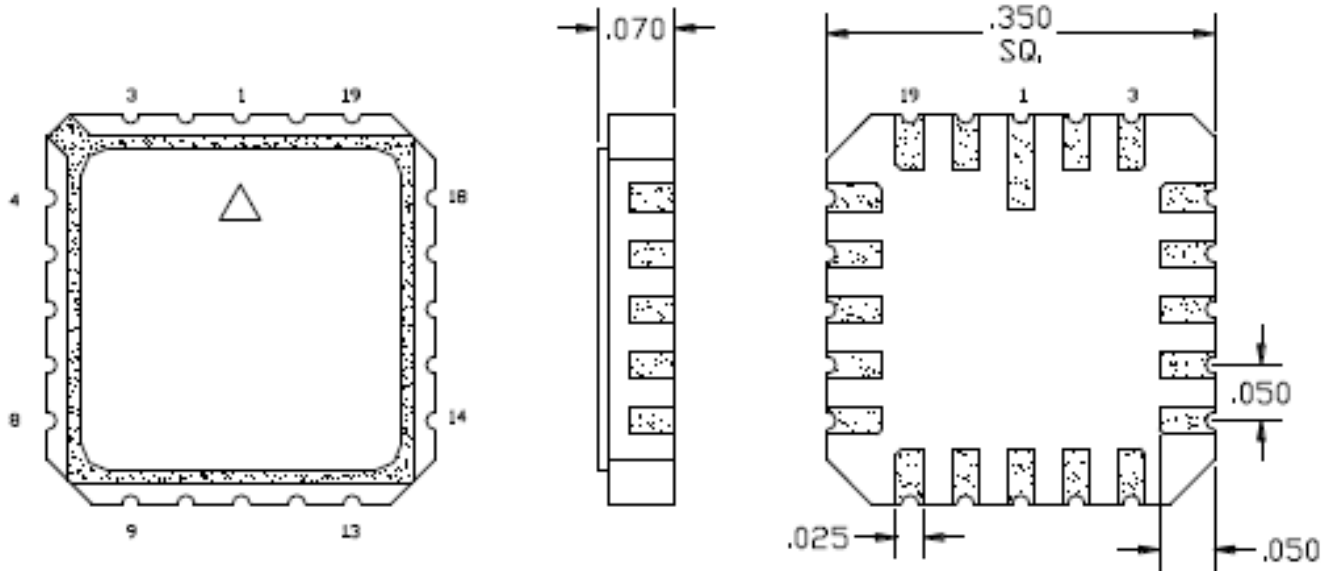
RATING	CONDITIONS	MIN.	TYP.	MAX.	UNITS
<b>ON CHARACTERISTICS</b>					
Forward current Transfer Ratio, $V_{CE} = -10\text{ V}$					
$h_{FE1}$	$I_C = -0.1\text{ mA}$	75	-	-	-
$h_{FE2}$	$I_C = -1.0\text{ mA}$	100	-	450	
$h_{FE3}$	$I_C = -10\text{ mA}$	100	-	-	
$h_{FE4}$	$I_C = -150\text{ mA}$	100	-	300	
$h_{FE5}$	$I_C = -500\text{ mA}$	50	-	-	
Collector Emitter Saturation Voltage					
$V_{CE(sat)1}$	$I_C = -150\text{ mA}, I_B = -15\text{ mA}$	-	-	-0.4	V
$V_{CE(sat)2}$	$I_C = -500\text{ mA}, I_B = -50\text{ mA}$			-1.6	
Base Emitter Saturation Voltage					
$V_{BE(sat)1}$	$I_C = -150\text{ mA}, I_B = -15\text{ mA}$	-0.6	-	-1.3	V
$V_{BE(sat)2}$	$I_C = -500\text{ mA}, I_B = -50\text{ mA}$			-2.6	
Forward current Transfer Ratio $h_{FE6}$	$V_{CE} = -10\text{ V}, I_C = -10\text{ mA}, T_A = -55^{\circ}\text{C}$	50	-	-	-

<b>OTHER CHARACTERISTICS*</b>					
Small signal short circuit forward current transfer ratio, $h_{fe}$	$V_{CE} = -10\text{ V}, I_C = -1\text{ mA}, f = 1\text{ KHz}$	100	-	-	-
Open Circuit output capacitance, $C_{obo}$	$V_{CB} = -10\text{ V}, I_E = 0, f = 1\text{ MHz}$	-	-	8	pF
Input capacitance (output open), $C_{ibo}$	$V_{EB} = -2\text{ V}, I_C = 0, f = 1\text{ MHz}$	-	-	30	pF
Saturated Turn on time, $t_{on}$	$V_{CC} = -30\text{ V}, R = 200\Omega$	-	-	45	ns
Saturated Turn off time, $t_{off}$	$V_{CC} = -30\text{ V}, R = 200\Omega$	-	-	300	ns

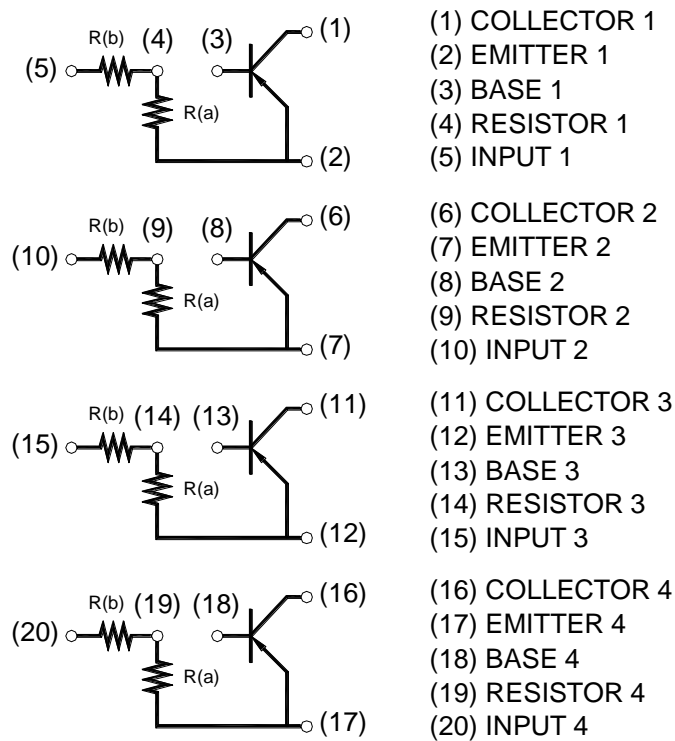
Note \* - These are guaranteed, but not tested in production.

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**Mechanical Outline:**



**Electrical Schematic (for SBA449001A version):**



Note: Pins 4,5,9,10,14,15,19,and 20 are not used (NC) for SBA449001

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**PART ORDERING INFORMATION:**

**Resistor Options\***

Part Number	Base to Emitter R(b)	Base to Input R(a)
SBA449001	No resistor	No resistor
SBA449001A	10K	10K

\*Contact factory for other resistor options.

**Screening Options:**

Part Number	Sensitron Screening Level	Screened In Accordance with:
SBA449001	-	-
SBA449001S	S	MIL-PRF-38534, Class H
SBA449001SS	SS	MIL-PRF-38534, Class K
SBA449001A	-	-
SBA449001AS	S	MIL-PRF-38534, Class H
SBA449001ASS	SS	MIL-PRF-38534, Class K

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