

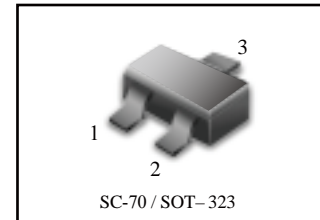
## General Purpose Transistor

### PNP Silicon

These transistors are designed for general purpose amplifier applications. They are housed in the SC-323/SC-70 package which is designed for low power surface mount applications.

#### Features

- We declare that the material of product compliance with RoHS requirements.

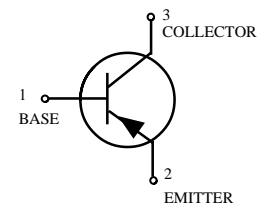


#### ORDERING INFORMATION

Device	Maring	Shipping
2N2907AU	20	3000 / Tape & Reel

#### MAXIMUM RATINGS (T<sub>A</sub> = 25°C)

Rating	Symbol	Max	Unit
Collector–Emitter Voltage	V <sub>CEO</sub>	-60	Vdc
Collector–Base Voltage	V <sub>CBO</sub>	-60	Vdc
Emitter–Base Voltage	V <sub>EBO</sub>	-5.0	Vdc
Collector Current – Continuous	I <sub>C</sub>	-600	mAdc



#### THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation (Note 1) T <sub>A</sub> = 25°C	P <sub>D</sub>	150	mW
Thermal Resistance, Junction–to–Ambient	R <sub>θJA</sub>	833	°C/W
Operating and Storage Junction Temperature Range	T <sub>J</sub> , T <sub>stg</sub>	-55 to +150	°C

#### ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25°C unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
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#### OFF CHARACTERISTICS

Collector–Emitter Breakdown Voltage (Note 1) (I <sub>C</sub> = -1.0 mAdc, I <sub>B</sub> = 0)	V <sub>(BR)CEO</sub>	-60	-	Vdc
Collector–Base Breakdown Voltage (I <sub>C</sub> = -10μAdc, I <sub>E</sub> = 0)	V <sub>(BR)CBO</sub>	-60	-	Vdc
Emitter–Base Breakdown Voltage (I <sub>E</sub> = -10μAdc, I <sub>C</sub> = 0)	V <sub>(BR)EBO</sub>	-5.0	-	Vdc
Base Cutoff Current (V <sub>CE</sub> = -30 Vdc, V <sub>EB</sub> = -0.5 Vdc)	I <sub>BL</sub>	-	-50	nAdc
Collector Cutoff Current (V <sub>CE</sub> = -30 Vdc, V <sub>EB</sub> = -0.5 Vdc)	I <sub>CEX</sub>	-	-50	nAdc

1. FR-5: 1.0\*0.75\*0.062 inch

2. Pulse Test : Pulse Width <300us, Duty Cycle < 2.0%

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## ON CHARACTERISTICS

DC Current Gain ( $I_C = -0.1 \text{ mAdc}$ , $V_{CE} = -10 \text{ Vdc}$ ) ( $I_C = -1.0 \text{ mAdc}$ , $V_{CE} = -10 \text{ Vdc}$ ) ( $I_C = -10 \text{ mAdc}$ , $V_{CE} = -10 \text{ Vdc}$ ) ( $I_C = -150 \text{ mAdc}$ , $V_{CE} = -10 \text{ Vdc}$ ) ( $I_C = -500 \text{ mAdc}$ , $V_{CE} = -10 \text{ Vdc}$ )	$H_{FE}$	75 100 100 100 50	- - - - -	-
Collector-Emitter Saturation Voltage ( $I_C = -150 \text{ mAdc}$ , $I_B = -15 \text{ mAdc}$ ) ( $I_C = -500 \text{ mAdc}$ , $I_B = -50 \text{ mAdc}$ )	$V_{CE(sat)}$	- -	-0.4 -1.6	Vdc
Base-Emitter Saturation Voltage ( $I_C = -150 \text{ mAdc}$ , $I_B = -15 \text{ mAdc}$ ) ( $I_C = -500 \text{ mAdc}$ , $I_B = -50 \text{ mAdc}$ )	$V_{BE(sat)}$	- -	-1.3 -2.6	Vdc

## SMALL-SIGNAL CHARACTERISTICS

Current-Gain - Bandwidth Product ( $I_C = -50 \text{ mAdc}$ , $V_{CE} = 20 \text{ Vdc}$ , $f = 100 \text{ MHz}$ )	$f_T$	200	-	MHz
Output Capacitance ( $V_{CB} = -10 \text{ Vdc}$ , $I_E = 0$ , $f = 1.0 \text{ MHz}$ )	$C_{obo}$	-	8.0	pF
Input Capacitance ( $V_{EB} = -2.0 \text{ Vdc}$ , $I_C = 0$ , $f = 1.0 \text{ MHz}$ )	$C_{ibo}$	-	30	pF

## SWITCHING CHARACTERISTICS

Delay Time	$(V_{CC} = -30 \text{ Vdc}$ , $V_{BE} = -0.5 \text{ Vdc}$ , $I_C = -150 \text{ mAdc}$ , $I_{B1} = -15 \text{ mAdc}$ )	$t_d$	-	10	ns
Rise Time		$t_r$	-	40	
Storage Time	$(V_{CC} = -30 \text{ Vdc}$ , $I_C = -150 \text{ mAdc}$ , $I_{B1} = I_{B2} = 15 \text{ mAdc}$ )	$t_s$	-	80	ns
Fall Time		$t_f$	-	30	

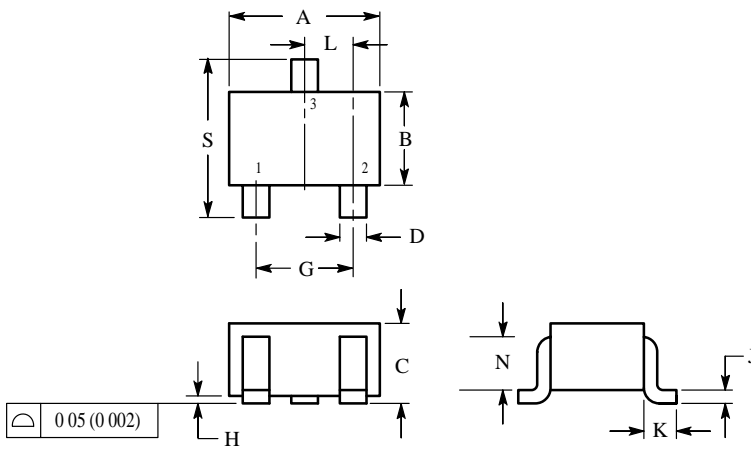
1. Device mounted on FR4 glass epoxy printed circuit board using the minimum recommended footprint.
2. Pulse Test: Pulse Width  $\leq 300 \mu\text{s}$ , Duty Cycle  $\leq 2.0\%$ .

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## SC-70 / SOT-323

NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.



DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.071	0.087	1.80	2.20
B	0.045	0.053	1.15	1.35
C	0.032	0.040	0.80	1.00
D	0.012	0.016	0.30	0.40
G	0.047	0.055	1.20	1.40
H	0.000	0.004	0.00	0.10
J	0.004	0.010	0.10	0.25
K	0.017 REF		0.425 REF	
L	0.026 BSC		0.650 BSC	
N	0.028 REF		0.700 REF	
S	0.079	0.095	2.00	2.40

