2N2904 2N2904A
2N2905 2N2905A

PNP SILICON TRANSISTORS



TO-39 CASE

Central Semiconductor Corp.

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR 2N2904, 2N2905 series types are PNP silicon transistors manufactured by the epitaxial planar process, designed for small signal, general purpose and switching applications.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: (T_A=25°C unless otherwise noted)

	SYMBOL	2N2904 2N2905	2N2904A 2N2905A	UNITS
Collector-Base Voltage	V_{CBO}	60	60	V
Collector-Emitter Voltage	V_{CEO}	40	60	V
Emitter-Base Voltage	V_{EBO}	5.0		V
Continuous Collector Current	I_C	0.6		A
Power Dissipation	P_D	0.8		W
Power Dissipation (T_C=25°C)	P_D	3.0		W
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +200		°C

ELECTRICAL CHARACTERISTICS: (T_A=25°C)

		2N2904 2N2905		2N2904A 2N2905A		
SYMBOL	TEST CONDITIONS	MIN	MAX	MIN	MAX	UNITS
I_{CBO}	V_{CB}=50V	-	20	-	10	nA
I_{CEV}	V_{CE}=30V, VEB=0.5V	-	-	-	50	nA
BV_{CBO}	I_C=10μA	60	-	60	-	V
BV_{CEO}	I_C=10mA	40	-	60	-	V
BV_{EBO}	I_E=10μA	5.0	-	5.0	-	V
$V_{CE(SAT)}$	I_C=150mA, I_B=15mA	-	0.4	-	0.4	V
$V_{CE(SAT)}$	I_C=500mA, I_B=50mA	-	1.6	-	1.6	V
$V_{BE(SAT)}$	I_C=150mA, I_B=15mA	-	1.3	-	1.3	V
$V_{BE(SAT)}$	I_C=500mA, I_B=50mA	-	2.6	-	2.6	V

		2N2904 2N2904A		2N2905 2N2905A	
		MIN	MAX	MIN	MAX
h_{FE}	V_{CE}=10V, I_C=100μA (2N2904, 2N2905)	20	-	35	-
h_{FE}	V_{CE}=10V, I_C=100μA (2N2904A, 2N2905A)	40	-	75	-
h_{FE}	V_{CE}=10V, I_C=1.0mA (2N2904, 2N2905)	25	-	50	-
h_{FE}	V_{CE}=10V, I_C=1.0mA (2N2904A, 2N2905A)	40	-	100	-
h_{FE}	V_{CE}=10V, I_C=10mA (2N2904, 2N2905)	35	-	75	-
h_{FE}	V_{CE}=10V, I_C=10mA (2N2904A, 2N2905A)	40	-	100	-
h_{FE}	V_{CE}=10V, I_C=150mA	40	120	100	300
h_{FE}	V_{CE}=10V, I_C=500mA (2N2904, 2N2905)	20	-	30	-
h_{FE}	V_{CE}=10V, I_C=500mA (2N2904A, 2N2905A)	40	-	50	-

R2 (6-April 2015)

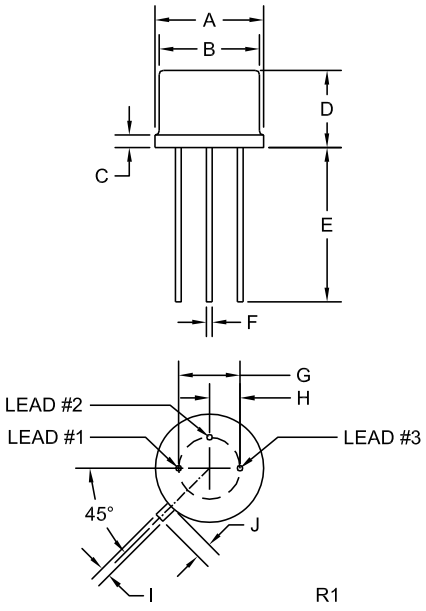
2N2904 2N2904A
2N2905 2N2905A

PNP SILICON TRANSISTORS

ELECTRICAL CHARACTERISTICS - Continued: (T_A=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
f_T	V_{CE}=20V, I_C=50mA, f=100MHz	200		MHz
C_{ob}	V_{CB}=10V, f=100kHz		8.0	pF
t_{on}	V_{CC}=30V, I_C=150mA, I_B=15mA		45	ns
t_{off}	V_{CC}=6.0V, I_C=150mA, I_{B1}=I_{B2}=15mA		180	ns

TO-39 CASE - MECHANICAL OUTLINE



DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A (DIA)	0.335	0.370	8.51	9.40
B (DIA)	0.315	0.335	8.00	8.51
C	-	0.040	-	1.02
D	0.240	0.260	6.10	6.60
E	0.500	-	12.70	-
F (DIA)	0.016	0.021	0.41	0.53
G (DIA)	0.200		5.08	
H	0.100		2.54	
I	0.028	0.034	0.71	0.86
J	0.029	0.045	0.74	1.14

TO-39 (REV: R1)

LEAD CODE:
1) Emitter
2) Base
3) Collector

MARKING: FULL PART NUMBER

OUTSTANDING SUPPORT AND SUPERIOR SERVICES

PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

CONTACT US

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