

2N2906 2N2906A
2N2907 2N2907A

PNP SILICON TRANSISTOR



TO-18 CASE



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DESCRIPTION:

The CENTRAL SEMICONDUCTOR 2N2906, 2N2907 series types are silicon PNP epitaxial planar transistors designed for small signal, general purpose switching applications.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: ($T_A=25^{\circ}\text{C}$)

Collector-Base Voltage
Collector-Emitter Voltage
Emitter-Base Voltage
Continuous Collector Current
Power Dissipation
Power Dissipation ($T_C=25^{\circ}\text{C}$)
Operating and Storage Junction Temperature
Thermal Resistance
Thermal Resistance

SYMBOL	2N2906	2N2906A	UNITS
	2N2907	2N2907A	
V_{CBO}	60	60	V
V_{CEO}	40	60	V
V_{EBO}		5.0	V
I_C		600	mA
P_D		400	mW
P_D		1.8	W
T_J, T_{stg}		-65 to +200	$^{\circ}\text{C}$
θ_{JA}		438	$^{\circ}\text{C/W}$
θ_{JC}		97	$^{\circ}\text{C/W}$

ELECTRICAL CHARACTERISTICS: ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	2N2906		2N2906A		UNITS
		2N2907	2N2907	2N2907A	2N2907A	
I_{CBO}	$V_{CB}=50\text{V}$	-	20	-	10	nA
I_{CBO}	$V_{CB}=50\text{V}, T_A=150^{\circ}\text{C}$	-	20	-	10	μA
I_{CEV}	$V_{CE}=30\text{V}, V_{EB}=0.5\text{V}$	-	50	-	50	nA
BV_{CBO}	$I_C=10\mu\text{A}$	60	-	60	-	V
BV_{CEO}	$I_C=10\text{mA}$	40	-	60	-	V
BV_{EBO}	$I_E=10\mu\text{A}$	5.0	-	5.0	-	V
$V_{CE(SAT)}$	$I_C=150\text{mA}, I_B=15\text{mA}$	-	0.4	-	0.4	V
$V_{CE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$	-	1.6	-	1.6	V
$V_{BE(SAT)}$	$I_C=150\text{mA}, I_B=15\text{mA}$	-	1.3	-	1.3	V
$V_{BE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$	-	2.6	-	2.6	V
f_T	$V_{CE}=20\text{V}, I_C=50\text{mA}, f=100\text{MHz}$	200	-	200	-	MHz
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$	-	8.0	-	8.0	pF
C_{ib}	$V_{EB}=2.0\text{V}, I_C=0, f=1.0\text{MHz}$	-	30	-	30	pF
t_{on}	$V_{CC}=30\text{V}, I_C=150\text{mA}, I_{B1}=15\text{mA}$	-	45	-	45	ns
t_{off}	$V_{CC}=6.0\text{V}, I_C=150\text{mA}, I_{B1}=I_{B2}=15\text{mA}$	-	100	-	100	ns

R4 (30-January 2012)

2N2906 2N2906A
2N2907 2N2907A

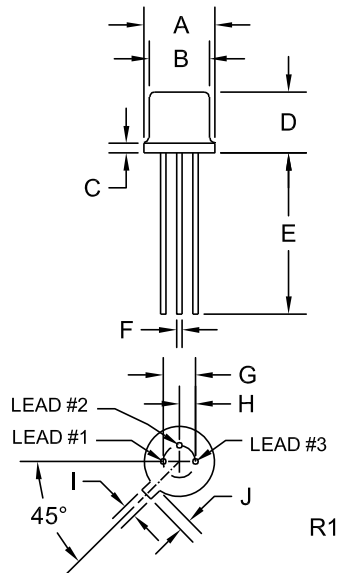
PNP SILICON TRANSISTOR



ELECTRICAL CHARACTERISTICS - Continued: ($T_A=25^\circ\text{C}$)

SYMBOL	TEST CONDITIONS	2N2906 2N2906A		2N2907 2N2907A	
		MIN	MAX	MIN	MAX
h_{FE}	$V_{CE}=10\text{V}$, $I_C=0.1\text{mA}$ (2N2906, 2N2907)	20	-	35	-
h_{FE}	$V_{CE}=10\text{V}$, $I_C=0.1\text{mA}$ (2N2906A, 2N2907A)	40	-	75	-
h_{FE}	$V_{CE}=10\text{V}$, $I_C=1.0\text{mA}$ (2N2906, 2N2907)	25	-	50	-
h_{FE}	$V_{CE}=10\text{V}$, $I_C=1.0\text{mA}$ (2N2906A, 2N2907A)	40	-	100	-
h_{FE}	$V_{CE}=10\text{V}$, $I_C=10\text{mA}$ (2N2906, 2N2907)	35	-	75	-
h_{FE}	$V_{CE}=10\text{V}$, $I_C=10\text{mA}$ (2N2906A, 2N2907A)	40	-	100	-
h_{FE}	$V_{CE}=10\text{V}$, $I_C=150\text{mA}$	40	120	100	300
h_{FE}	$V_{CE}=10\text{V}$, $I_C=500\text{mA}$ (2N2906, 2N2907)	20	-	30	-
h_{FE}	$V_{CE}=10\text{V}$, $I_C=500\text{mA}$ (2N2906A, 2N2907A)	40	-	50	-

TO-18 CASE - MECHANICAL OUTLINE



SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A (DIA)	0.209	0.230	5.31	5.84
B (DIA)	0.178	0.195	4.52	4.95
C	-	0.030	-	0.76
D	0.170	0.210	4.32	5.33
E	0.500	-	12.70	-
F (DIA)	0.016	0.019	0.41	0.48
G (DIA)	0.100		2.54	
H	0.050		1.27	
I	0.036	0.046	0.91	1.17
J	0.028	0.048	0.71	1.22

TO-18 (REV: R1)

LEAD CODE:

- 1) Emitter
- 2) Base
- 3) Collector

MARKING: FULL PART NUMBER

R4 (30-January 2012)

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).

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