

2N2895
2N2896
2N2897

**SILICON
NPN TRANSISTORS**



TO-18 CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR 2N2895, 2N2896, and 2N2897 are silicon NPN epitaxial planar transistors designed for small signal, general purpose applications.

MARKING: FULL PART NUMBER

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

	SYMBOL	2N2895	2N2896	2N2897	UNITS
Collector-Base Voltage	V_{CBO}	120	140	60	V
Collector-Emitter Voltage	V_{CER}	80	140	60	V
Collector-Emitter Voltage	V_{CEO}	65	90	45	V
Emitter-Base Voltage	V_{EBO}		7.0		V
Continuous Collector Current	I_C		1.0		A
Power Dissipation	P_D		500		mW
Power Dissipation ($T_C=25^\circ\text{C}$)	P_D		1.8		W
Operating and Storage Junction Temperature	T_J, T_{stg}		-65 to +200		$^\circ\text{C}$

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

SYMBOL	TEST CONDITIONS	2N2895		2N2896		2N2897		UNITS
		MIN	MAX	MIN	MAX	MIN	MAX	
I_{CBO}	$V_{CB}=60\text{V}$	-	2.0	-	10	-	50	nA
I_{CBO}	$V_{CB}=60\text{V}, T_A=150^\circ\text{C}$	-	2.0	-	-	-	50	μA
I_{CBO}	$V_{CB}=90\text{V}$	-	-	-	10	-	-	nA
I_{CBO}	$V_{CB}=90\text{V}, T_A=150^\circ\text{C}$	-	-	-	10	-	-	μA
I_{EBO}	$V_{EB}=5.0\text{V}$	-	5.0	-	10	-	50	nA
BV_{CBO}	$I_C=100\mu\text{A}$	120	-	140	-	60	-	V
BV_{CER}	$I_C=100\text{mA}, R_{BE}=10\Omega$	80	-	140	-	60	-	V
BV_{CEO}	$I_C=100\text{mA}$	65	-	90	-	45	-	V
BV_{EBO}	$I_E=100\mu\text{A}$	7.0	-	7.0	-	7.0	-	V
$V_{CE(SAT)}$	$I_C=150\text{mA}, I_B=15\text{mA}$	-	0.6	-	0.6	-	1.0	V
$V_{BE(SAT)}$	$I_C=150\text{mA}, I_B=15\text{mA}$	-	1.2	-	1.2	-	1.3	V
h_{FE}	$V_{CE}=10\text{V}, I_C=10\mu\text{A}$	10	-	-	-	-	-	
h_{FE}	$V_{CE}=10\text{V}, I_C=100\mu\text{A}$	20	-	-	-	-	-	
h_{FE}	$V_{CE}=10\text{V}, I_C=1.0\text{mA}$	-	-	35	-	35	-	
h_{FE}	$V_{CE}=10\text{V}, I_C=10\text{mA}$	35	-	-	-	-	-	
h_{FE}	$V_{CE}=10\text{V}, I_C=10\text{mA}, T_A=-55^\circ\text{C}$	20	-	20	-	-	-	
h_{FE}	$V_{CE}=10\text{V}, I_C=150\text{mA}$	40	120	60	200	50	200	
h_{FE}	$V_{CE}=10\text{V}, I_C=500\text{mA}$	25	-	-	-	-	-	

R0 (6-August 2013)

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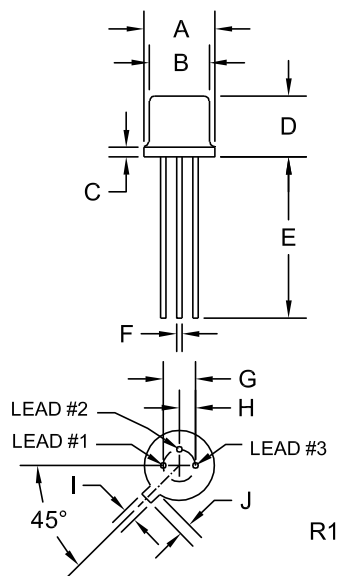
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ELECTRICAL CHARACTERISTICS - Continued: ($T_A=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	2N2895		2N2896		2N2897		UNITS
		MIN	MAX	MIN	MAX	MIN	MAX	
f_T	$V_{CE}=10\text{V}$, $I_C=50\text{mA}$, $f=20\text{MHz}$	120	-	120	-	100	-	MHz
C_{ob}	$V_{CB}=10\text{V}$, $I_E=0$, $f=100\text{kHz}$	-	15	-	15	-	15	pF
C_{ib}	$V_{BE}=0.5\text{V}$, $I_C=0$, $f=100\text{kHz}$	-	80	-	80	-	80	pF
h_{fe}	$V_{CE}=5.0\text{V}$, $I_C=5.0\text{mA}$, $f=1.0\text{kHz}$	50	200	50	275	50	275	
NF	$V_{CE}=10\text{V}$, $I_C=0.3\text{mA}$, $R_S=500\Omega$, $f=1.0\text{kHz}$, $BW=15\text{kHz}$	-	8.0	-	-	-	-	dB

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

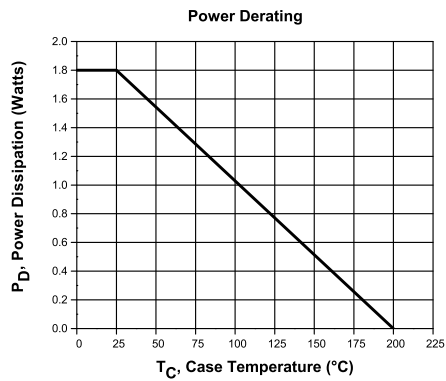
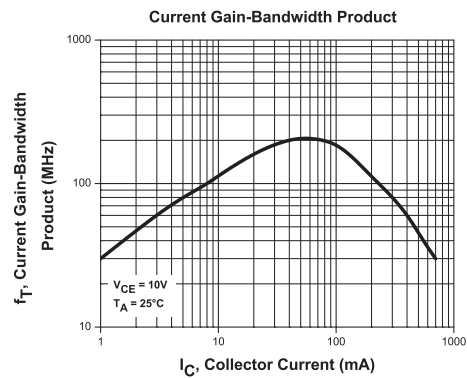
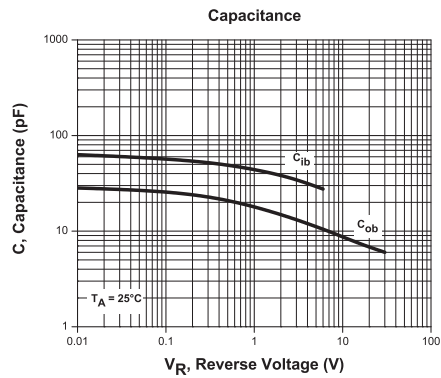
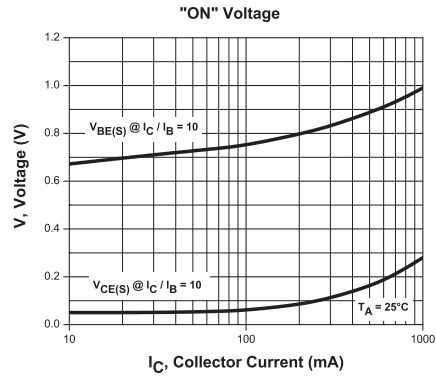
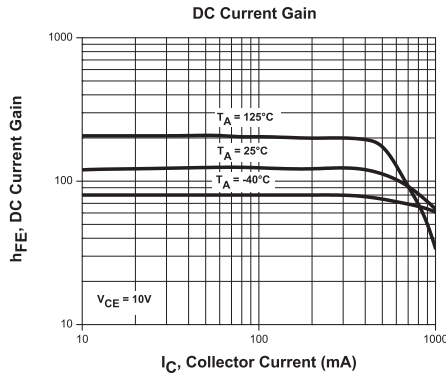
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TYPICAL ELECTRICAL CHARACTERISTICS



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