

2N6315 2N6316 NPN
2N6317 2N6318 PNP

**COMPLEMENTARY
SILICON POWER TRANSISTORS**



TO-66 CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR 2N6315 series devices are complementary silicon power transistors, mounted in a hermetically sealed metal case, designed for general purpose amplifier and switching applications.

MARKING: FULL PART NUMBER

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

Collector-Base Voltage
Collector-Emitter Voltage
Emitter-Base Voltage
Continuous Collector Current
Peak Collector Current
Continuous Base Current
Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance

SYMBOL	2N6315	2N6316	UNITS
	2N6317	2N6318	
V_{CBO}	60	80	V
V_{CEO}	60	80	V
V_{EBO}		5.0	V
I_C		7.0	A
I_{CM}		15	A
I_B		2.0	A
P_D		90	W
T_J, T_{stg}	-65 to +200		$^\circ\text{C}$
θ_{JC}	1.95		$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CBO}	$V_{CB}=\text{Rated } V_{CBO}$		0.25	mA
I_{CEV}	$V_{CE}=\text{Rated } V_{CEO}, V_{BE}=1.5\text{V}$		0.25	mA
I_{CEV}	$V_{CE}=\text{Rated } V_{CEO}, V_{BE}=1.5\text{V}, T_C=150^\circ\text{C}$		2.0	mA
I_{CEO}	$V_{CE}=1/2 \text{ Rated } V_{CEO}$		0.50	mA
I_{EBO}	$V_{EB}=5.0\text{V}$		1.0	mA
BV_{CEO}	$I_C=100\text{mA}, (2N6315, 2N6317)$	60		V
BV_{CEO}	$I_C=100\text{mA}, (2N6316, 2N6318)$	80		V
$V_{CE(SAT)}$	$I_C=4.0\text{A}, I_B=0.4\text{A}$		1.0	V
$V_{CE(SAT)}$	$I_C=7.0\text{A}, I_B=1.75\text{A}$		2.0	V
$V_{BE(SAT)}$	$I_C=7.0\text{A}, I_B=1.75\text{A}$		2.5	V
$V_{BE(ON)}$	$V_{CE}=4.0\text{V}, I_C=2.5\text{A}$		1.5	V
h_{FE}	$V_{CE}=4.0\text{V}, I_C=0.5\text{A}$	35		
h_{FE}	$V_{CE}=4.0\text{V}, I_C=2.5\text{A}$	20	100	
h_{FE}	$V_{CE}=4.0\text{V}, I_C=7.0\text{A}$	4.0		
h_{fe}	$V_{CE}=4.0\text{V}, I_C=500\text{mA}, f=1.0\text{kHz}$	20		
f_T	$V_{CE}=10\text{V}, I_C=250\text{mA}, f=1.0\text{MHz}$	4.0		MHz

R3 (2-September 2014)

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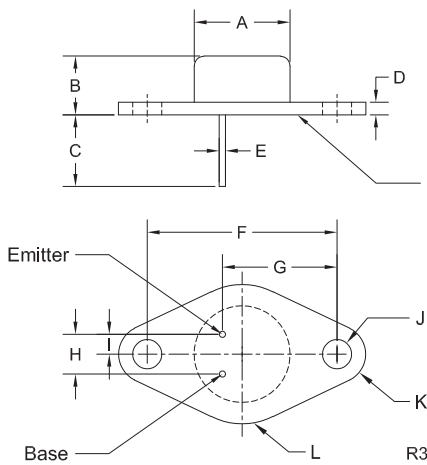


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ELECTRICAL CHARACTERISTICS - Continued: ($T_C=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MAX	UNITS
C_{ob}	$V_{CB}=10\text{V}$, $I_E=0$, $f=1.0\text{MHz}$, (2N6315, 2N6316)	200	pF
C_{ob}	$V_{CB}=10\text{V}$, $I_E=0$, $f=1.0\text{MHz}$, (2N6317, 2N6318)	300	pF
t_r	$V_{CC}=30\text{V}$, $I_C=2.5\text{A}$, $I_{B1}=I_{B2}=0.25\text{A}$	0.7	μs
t_{off}	$V_{CC}=30\text{V}$, $I_C=2.5\text{A}$, $I_{B1}=I_{B2}=0.25\text{A}$	1.8	μs

TO-66 CASE - MECHANICAL OUTLINE



Seating Plane:
 The seating plane must be within 0.001" concave to 0.004" convex within 0.600" diameter from the center of the device.

SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A (DIA)	0.470	0.500	11.94	12.70
B	0.250	0.340	6.35	8.64
C	0.360	-	9.14	-
D	0.050	0.075	1.27	1.91
E (DIA)	0.028	0.034	0.71	0.86
F	0.956	0.964	24.28	24.48
G	0.570	0.590	14.48	14.99
H	0.190	0.210	4.83	5.33
I	0.093	0.107	2.36	2.72
J (DIA)	0.142	0.152	3.61	3.86
K (RAD)	0.141		3.58	
L (RAD)	0.345		8.76	

TO-66 (REV:R3)

**MARKING:
 FULL PART NUMBER**

R3 (2-September 2014)

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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

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