

2N6315 2N6316 NPN  
2N6317 2N6318 PNP

**COMPLEMENTARY SILICON  
POWER TRANSISTORS**



**TO-66 CASE**



[www.centrasemi.com](http://www.centrasemi.com)

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR 2N6315 SERIES types 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		$^\circ\text{C}$
$\theta_{JC}$	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

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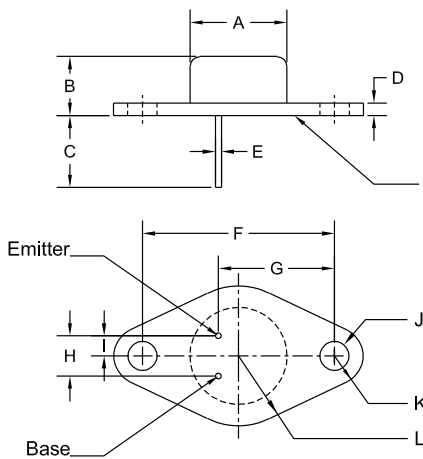
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**ELECTRICAL CHARACTERISTICS - Continued:** ( $T_C=25^\circ\text{C}$  unless otherwise noted)

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	$\mu\text{s}$
$t_{off}$	$V_{CC}=30\text{V}$ , $I_C=2.5\text{A}$ $I_{B1}=I_{B2}=0.25\text{A}$	1.8	$\mu\text{s}$

**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	0.958	0.962	24.33	24.43
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)	0.145		3.68	
L (RAD)	0.350		8.89	

TO-66 (REV:R2)

**MARKING:  
FULL PART NUMBER**

R2

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