

2N6298 2N6299 PNP  
2N6300 2N6301 NPN

**COMPLEMENTARY SILICON  
DARLINGTON POWER TRANSISTORS**



**TO-66 CASE**



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

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR 2N6298 series devices are complementary silicon Darlington power transistors manufactured by the epitaxial base process designed for high gain amplifier and medium speed 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	2N6298	2N6299	UNITS
	2N6300	2N6301	
$V_{CBO}$	60	80	V
$V_{CEO}$	60	80	V
$V_{EBO}$		5.0	V
$I_C$		8.0	A
$I_{CM}$		16	A
$I_B$		120	mA
$P_D$		75	W
$T_J, T_{stg}$		-65 to +200	$^\circ\text{C}$
$\theta_{JC}$		2.33	$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$I_{CEV}$	$V_{CE}=\text{Rated } V_{CEO}, V_{BE}=1.5\text{V}$		0.5	mA
$I_{CEV}$	$V_{CE}=\text{Rated } V_{CEO}, V_{BE}=1.5\text{V}, T_C=150^\circ\text{C}$		5.0	mA
$I_{CEO}$	$V_{CE}=\frac{1}{2}\text{Rated } V_{CEO}$		0.5	mA
$I_{EBO}$	$V_{EB}=5.0\text{V}$		2.0	mA
$BV_{CEO}$	$I_C=100\text{mA}$ (2N6298, 2N6300)	60		V
$BV_{CEO}$	$I_C=100\text{mA}$ (2N6299, 2N6301)	80		V
$V_{CE(SAT)}$	$I_C=4.0\text{A}, I_B=16\text{mA}$		2.0	V
$V_{CE(SAT)}$	$I_C=8.0\text{A}, I_B=80\text{mA}$		3.0	V
$V_{BE(SAT)}$	$I_C=8.0\text{A}, I_B=80\text{mA}$		4.0	V
$V_{BE(ON)}$	$V_{CE}=3.0\text{V}, I_C=4.0\text{A}$		2.8	V
$h_{FE}$	$V_{CE}=3.0\text{V}, I_C=4.0\text{A}$	750	18K	
$h_{FE}$	$V_{CE}=3.0\text{V}, I_C=8.0\text{A}$	100		
$h_{fe}$	$V_{CE}=3.0\text{V}, I_C=3.0\text{A}, f=1.0\text{kHz}$	300		
$f_T$	$V_{CE}=3.0\text{V}, I_C=3.0\text{A}, f=1.0\text{MHz}$	4.0		MHz
$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=100\text{kHz}$ (NPN types)		200	pF
$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=100\text{kHz}$ (PNP types)		300	pF

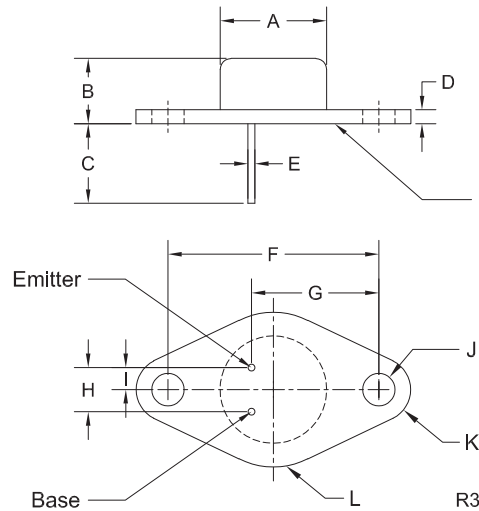
R3 (2-September 2014)

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TO-66 CASE - MECHANICAL OUTLINE



MARKING:  
 FULL PART NUMBER

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)

R3 (2-September 2014)