2N4296
2N4298
2N4299

SILICON
NPN POWER TRANSISTORS



TO-66 CASE

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR 2N4296, 2N4298, and 2N4299 devices are silicon NPN power transistors designed for power amplifier and switching applications.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: (T_C=25°C)	**SYMBOL**	**2N4296**	**2N4298**	**2N4299**	**UNITS**
Collector-Base Voltage	V_{CBO}	350	500	350	V
Collector-Emitter Voltage	V_{CEO}	250	350	250	V
Emitter-Base Voltage	V_{EBO}		4.0		V
Continuous Collector Current	I_C		1.0		A
Continuous Base Current	I_B		250		mA
Power Dissipation	P_D		20		W
Operating and Storage Junction Temperature	T_J, T_{stg}		-65 to +175		°C
Thermal Resistance	Θ_{JC}		7.5		°C/W

ELECTRICAL CHARACTERISTICS: (T_C=25°C unless otherwise noted)

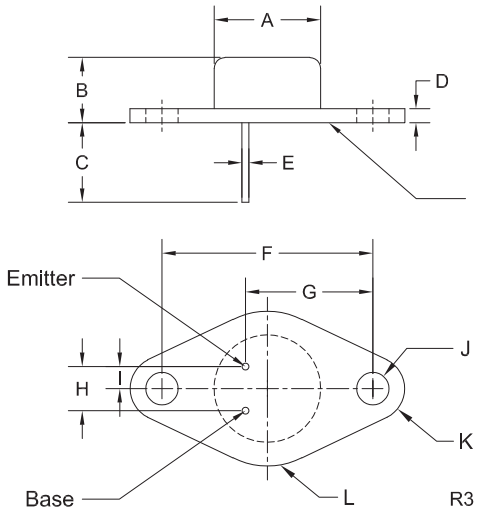
		2N4296		**2N4298**		**2N4299**		
SYMBOL	**TEST CONDITIONS**	**MIN**	**MAX**	**MIN**	**MAX**	**MIN**	**MAX**	**UNITS**
I_{CEV}	V_{CE}=150V, V_{BE}=1.5V, T_C=135°C	-	600	-	600	-	600	µA
I_{CBO}	V_{CB}=350V	-	100	-	-	-	100	µA
I_{CBO}	V_{CB}=500V	-	-	-	100	-	-	µA
I_{EBO}	V_{BE}=4.0V	-	100	-	100	-	100	µA
BV_{CEO}	I_C=50mA	200	-	350	-	250	-	V
$V_{CE(SAT)}$	I_C=50mA, I_B=5.0mA	-	0.9	-	0.9	-	0.75	V
$V_{BE(SAT)}$	I_C=50mA, I_B=5.0mA	-	1.5	-	1.5	-	1.5	V
$V_{BE(ON)}$	V_{CE}=10V, I_C=100mA	-	0.9	-	0.9	-	0.9	V
h_{FE}	V_{CE}=10V, I_C=5.0mA	35	-	20	-	35	-	
h_{FE}	V_{CE}=10V, I_C=50mA	50	150	25	75	50	150	
h_{FE}	V_{CE}=10V, I_C=100mA	35	-	20	-	35	-	
f_T	V_{CE}=10V, I_C=20mA, f=5.0MHz	20	-	20	-	20	-	MHz
C_{cb}	V_{CB}=100V, I_C=0, f=0.1 to 1.0MHz	-	6.0	-	6.0	-	6.0	pF
t_{on}	V_{CC}=100V, I_C=100mA, I_{B1}=I_{B2}=10mA	-	7.0	-	7.0	-	7.0	µs
t_{off}	V_{CC}=200V, I_C=100mA, I_{B1}=I_{B2}=10mA	-	10	-	10	-	10	µs
$I_{S/b}$	V_{CE}=200V	75	-	75	-	75	-	mA

R1 (2-September 2014)

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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.

MARKING:
FULL PART NUMBER

DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	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)