

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

2N4296
2N4298
2N4299

NPN SILICON
POWER TRANSISTOR

JEDEC TO-66 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N4296, 2N4298, 2N4299 types are Silicon NPN Power Transistors designed for power amplifier and switching applications.

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
Collector Current	I _C		1.0		A
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)

SYMBOL	TEST CONDITIONS	2N4296		2N4298		2N4299		UNITS
		MIN	MAX	MIN	MAX	MIN	MAX	
I _{CEV}	V _{CE} = 150V, V _{EB} = 1.5, T _C = 135°C		600		600		600	μA
I _{CBO}	V _{CE} = 350V		100		-		100	μA
I _{CBO}	V _{CE} = 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 = 5MHz	20		20		20		MHz
I _{S/b}	V _{CE} = 200V	75		75		75		mA
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