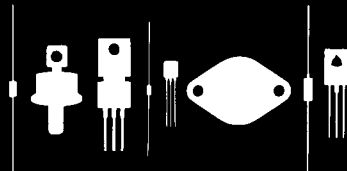


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145 Adams Avenue
Hauppauge, New York 11788



2N6298 2N6299 PNP

2N6300 2N6301 NPN

COMPLEMENTARY SILICON DARLINGTON
POWER TRANSISTORS

JEDEC TO-66 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N6298 series types are complementary silicon darlington power transistors manufactured by the epitaxial base process designed for high gain amplifier and medium speed switching applications.

MAXIMUM RATINGS ($T_C=25^\circ\text{C}$ unless otherwise noted)

	SYMBOL	2N6298 2N6300	2N6299 2N6301	UNIT
Collector-Base Voltage	V_{CB0}	60	80	V
Collector-Emitter Voltage	V_{CE0}	60	80	V
Emitter -Base Voltage	V_{EB0}		5.0	V
Collector Current	I_C		8.0	A
Collector Current-PEAK	I_{CM}		16	A
Base Current	I_B		120	mA
Power Dissipation	P_D		75	W
Operating and Storage				
Junction Temperature	T_J, T_{STG}	-65 to +200		$^\circ\text{C}$
Thermal Resistance	θ_{JC}	2.33		$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	2N6298 2N6300		2N6299 2N6301		UNIT
		MIN	MAX	MIN	MAX	
I_{CEV}	$V_{CE}=\text{Rated } V_{CB0}, V_{BE}(\text{OFF})=1.5\text{V}$		0.5		0.5	mA
I_{CEV}	$V_{CE}=\text{Rated } V_{CB0}, V_{BE}(\text{OFF})=1.5\text{V}, T_C=150^\circ\text{C}$		5.0		5.0	mA
I_{CE0}	$V_{CE}=\frac{1}{2}\text{Rated } V_{CE0}$		0.5		0.5	mA
I_{EB0}	$V_{BE}=5.0\text{V}$		2.0		2.0	mA
BV_{CE0}	$I_C=100\text{mA}$	60		80		V
$V_{CE}(\text{SAT})$	$I_C=4.0\text{A}, I_B=16\text{mA}$		2.0		2.0	V
$V_{CE}(\text{SAT})$	$I_C=8.0\text{A}, I_B=80\text{mA}$		3.0		3.0	V
$V_{BE}(\text{SAT})$	$V_{CE}=8.0\text{V}, I_C=80\text{mA}$		4.0		4.0	V
$V_{BE}(\text{ON})$	$V_{CE}=3.0\text{V}, I_C=4.0\text{A}$		2.8		2.8	V
h_{FE}	$V_{CE}=3.0\text{V}, I_C=4.0\text{A}$	750	18K	750	18K	
h_{FE}	$V_{CE}=3.0\text{V}, I_C=8.0\text{A}$	100	-	100	-	
h_{fe}	$V_{CE}=3.0\text{V}, I_C=3.0\text{A}, f=1.0\text{kHz}$	300	-	300	-	
f_T	$V_{CE}=3.0\text{V}, I_C=3.0\text{A}, f=1.0\text{MHz}$	4.0		4.0		MHz
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=0.1\text{MHz}$ (NPN Types)		200		200	pF
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=0.1\text{MHz}$ (PNP Types)		300		300	pF

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