

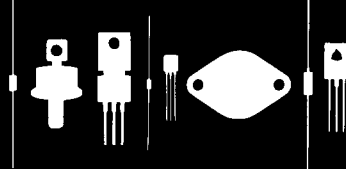
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145 Adams Avenue  
Hauppauge, New York 11788



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	$V_{EBO}$		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	$T_J, T_{STG}$	-65 to +200		$^\circ\text{C}$
Junction Temperature	$\theta_{JC}$	2.33		$^\circ\text{C}/\text{W}$

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
$I_{EBO}$	$V_{BE}=5.0\text{V}$		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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