

## SILICON NPN DARLINGTON POWER TRANSISTORS

### DESCRIPTION :

- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = 80V(\text{Min})$
- High DC Current Gain  
:  $h_{FE} = 750(\text{Min}) @ I_C = 2A$
- Low Saturation Voltage
- Complement to Type 2N6297

### APPLICATIONS :

- Designed for high gain amplifier and medium speed switching applications

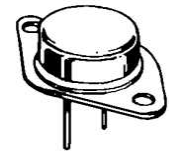
**NPN**

**2N6295**

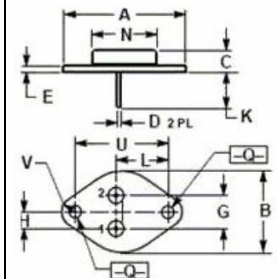
**4 AMPERES  
NPN SILICON  
DARLINGTON  
POWER TRANSISTOR  
80 VOLTS  
50 WATTS**

### MAXIMUM RATINGS ( $T_a = 25^\circ\text{C}$ )

Characteristic	Symbol	2N6295	Unit
Collector-Base Voltage	$V_{CBO}$	80	V
Collector-Emitter Voltage	$V_{CEO}$	80	V
Emitter-Base Voltage	$V_{EBO}$	5	V
Collector Current-Continuous	$I_C$	4	A
Collector Current-Peak	$I_{CM}$	8	A
Base Current-Continuous	$I_B$	80	mA
Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	$P_C$	50	Watts
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65 to +150	$^\circ\text{C}$



**TO-66**



PIN 1.BASE.  
2.EMITTER  
COLLECTOR(CASE)

DIM	MILLIMETERS	
	MIN	MAX
A	31.40	31.80
B	17.30	17.90
C	6.70	7.10
D	0.70	0.90
E	1.40	1.80
G	5.08	
H	2.54	
K	9.80	10.50
L	14.70	14.90
N	12.40	12.70
O	3.60	3.80
U	24.30	24.50
V	3.50	3.70

### THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	$R_{thj-c}$	3.5	$^\circ\text{C/W}$

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

Characteristic	Symbol	Min.	Max	Unit
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## OFF CHARACTERISTICS

Collector-Emitter Sustaining Voltage ( $I_C = 50 \text{ mA}$ , $I_B = 0$ )	$V_{CEO(SUS)}$	80		V
Collector Cutoff Current ( $V_{CE} = 80 \text{ V}$ , $V_{EB(OFF)} = 1.5 \text{ V}$ )	$I_{CEV}$		0.5	mA
Collector Cutoff Current ( $V_{CEB} = 40 \text{ V}$ , $I_B = 0$ )	$I_{CEO}$		0.5	mA
Emitter Cutoff Current ( $V_{EB} = 5 \text{ V}$ , $I_C = 0$ )	$I_{EBO}$		2.0	mA

## ON CHARACTERISTICS

DC Current Gain ( $I_C = 2 \text{ A}$ , $V_{CE} = 3 \text{ V}$ ) ( $I_C = 4 \text{ A}$ , $V_{CE} = 3 \text{ V}$ )	$h_{FE}$	750 100	18000	
Collector-Emitter Saturation Voltage ( $I_C = 2 \text{ A}$ , $I_B = 8 \text{ mA}$ ) ( $I_C = 4 \text{ A}$ , $I_B = 40 \text{ mA}$ )	$V_{CE(SAT)}$		2.0 3.0	V
Base-Emitter Saturation Voltage ( $I_C = 4 \text{ A}$ , $I_B = 40 \text{ mA}$ )	$V_{BE(SAT)}$		4.0	V
Base-Emitter On Voltage ( $I_C = 2 \text{ A}$ , $V_{CE} = 3 \text{ V}$ )	$V_{BE(ON)}$		2.8	V

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