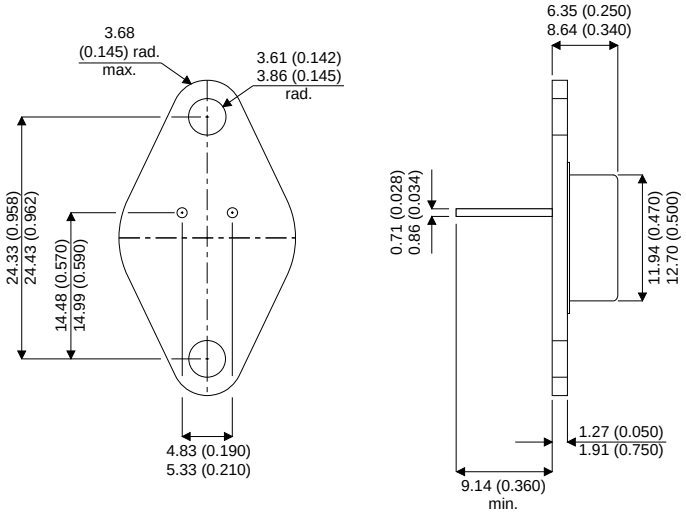
2N6295

MECHANICAL DATA
Dimensions in mm(inches)

DARLINGTON COMPLEMENTARY SILICON POWER TRANSISTOR



TO–66

PIN 1 — Base PIN 2 — Emitter Case is Collector.

FEATURES

- **LOW $V_{CE(SAT)}$**
- **HIGH CURRENT**

APPLICATIONS

- **GENERAL PURPOSE AMPLIFIER**
- **LOW FREQUENCY SWITCHING**
- **HAMMER DRIVER APPLICATIONS**

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C unless otherwise stated)

V_{CEO}	Collector – Emitter Voltage	80V
V_{CB}	Collector – Base Voltage	80V
V_{EB}	Emitter – Base Voltage	5V
I_C	Collector Current – Continuous	4A
	Peak	8A
I_B	Base Current	80mA
P_D	Total Power Dissipation at T_{case} = 25°C	50W
	Derate above 25°C	0.286 W/°C
T_j, T_{stg}	Operating and Storage Junction Temperature Range	–65 to 200°C

THERMAL CHARACTERISTICS

RθJC	Thermal Resistance, Junction to Case	3.5 °C/W

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ELECTRICAL CHARACTERISTICS (T_{case} = 25°C unless otherwise stated)

Parameter		Test Conditions		Min.	Typ.	Max.	Unit
OFF CHARACTERISTICS							
$V_{CEO(sus)}$	Collector - Emitter Sustaining Voltage	I_C = 50mA	I_B = 0	80			V
I_{CEO}	Collector Cut-off Current	I_B = 0	V_{CE} = 40V	0.5			mA
I_{CEX}	Collector – Emitter Cut-off Current	V_{CE} = Rated V_{CB}	$V_{EB(off)}$ =1 5V			0.5	mA
			T_c = 150°C			5.0	
I_{EBO}	Emitter Cut-off Current	I_C = 0	V_{BE} = 5V			2.0	mA
ON CHARACTERISTICS							
h_{FE}	DC Current Gain	I_C = 2A	V_{CE} = 3V	750		18000	—
		I_C = 4A	V_{CE} = 3V	100			
$V_{CE(sat)}$	Collector – Emitter Saturation Voltage	I_C = 2A	I_B = 8.0mA			2.0	V
		I_C = 4A	I_B = 40mA			3.0	
$V_{BE(sat)}$	Base – Emitter Saturation Voltage	I_C = 4A	I_B = 40mA			4.0	V
$V_{BE(on)}$	Base – Emitter On Voltage	I_C = 2A	V_{CE} = 3V			2.8	V
DYNAMIC CHARACTERISTICS							
|hfe|	Magnitude of Common Emitter Small Signal Short Circuit Forward current Transfer Ratio	I_C = 1.5A f =1.0 MHz	V_{CE} = 3V	4.0			—
C_{ob}	Output Capacitance	V_{CB} = 10V f =0.1 MHz	I_E = 0			120	pF
hfe	Small Signal Current Gain	I_C = 1.5A f =1.0 KHz	V_{CE} = 3.0V	300			—

*Pulse test tp =300μs $\delta \leq 2\%$