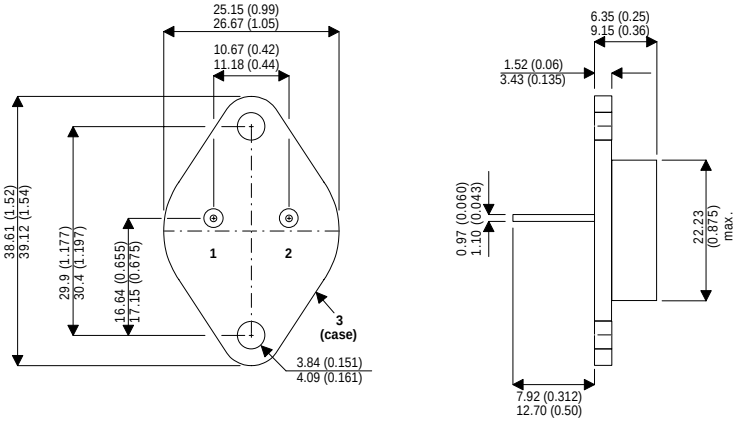
2N6578

MECHANICAL DATA
Dimensions in mm (inches)

NPN BIPOLAR POWER DARLINGTON TRANSISTOR



FEATURES

- **FAST SWITCHING**
- **CECC SCREENING OPTIONS**
- **SPACE QUALITY LEVELS OPTIONS**
- **JAN LEVEL SCREENING OPTIONS**

APPLICATIONS

- **HIGH SPEED SWITCHING CIRCUITS**
- **POWER AMPLIFIERS**

TO-3 (TO-204AA)

Underside View

1 = Emitter 2 = Base 3 = Collector

ABSOLUTE MAXIMUM RATINGS (T_C = 25°C unless otherwise stated)

V_{CBO}	Collector – Base Voltage (I_E = 0)	120V
V_{CEO}	Collector – Emitter Voltage (I_B = 0)	120V
V_{EBO}	Emitter – Base Voltage (I_C = 0)	7V
I_B	Base Current	250mA
I_C	Collector Current	15A
P_D	Power Dissipation @ T_C = 25°C	120W
$R_{\theta JC}$	Thermal Resistance Junction to Case	1.46°C/W
T_J , T_{STG}	Operating and Storage Junction Temperature Range	–65 to +200°C

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SEME LAB

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ELECTRICAL CHARACTERISTICS (T_C = 25°C unless otherwise stated)

	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
BV_{CEO}	Collector – Emitter Breakdown Voltage	I_C = 200mA	120			V
I_{CBO}	Collector – Base Cut-off Current	V_{CB} = 120V			500	µA
I_{CEV}	Collector – Emitter Cut-off Current	V_{CEV} = 120V $V_{BE(off)}$ = 1.5V			5.0	mA
I_{CER}	Collector – Emitter Cut-off Current	V_{CER} = 120V R_{BE} = 10kΩ T_C = 150°C			5.0	
I_{CEO}	Collector – Base Cut-off Current	V_{CE} = 120V			1.0	
$V_{CE(sat)}$	Collector – Emitter Saturation Voltage	I_C = 10A I_B = 100mA			2.8	V
		I_C = 15A I_B = 150mA			4.0	
$V_{BE(sat)}$	Base – Emitter On Voltage	I_C = 10A I_B = 100mA			3.5	
		I_C = 15A I_B = 150mA			4.5	
h_{FE}	DC Current Gain	I_C = 0.4A V_{CE} = 3V	200			—
		I_C = 4.0A V_{CE} = 3V	2000		20000	
		I_C = 10A V_{CE} = 3V	500		5000	
		I_C = 15A V_{CE} = 4V	100			
V_F	Forward Voltage	I_{EC} = 15A	4.5			V
$[h_{fe}]$	Small Signal Current Gain	V_{CE} = 3V I_C = 3A f = 1.0MHz	10		200	—
t_d	Delay Time	I_C = 10A V_{CC} = 30V			0.15	µs
t_r	Rise time	I_{B1} = 100mA			1.0	
t_s	Storage Time	I_C = 10A V_{CC} = 30V			2.0	
t_f	Fall Time	I_{B1} = -I_{B2} = 100mA			7.0	

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