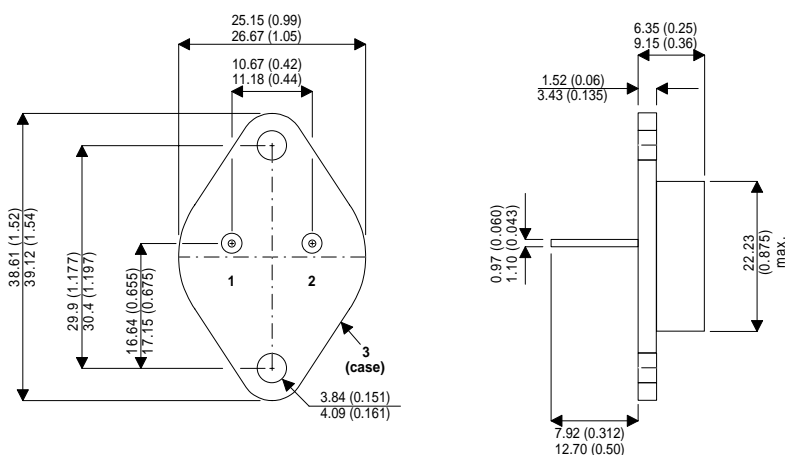


**MECHANICAL DATA**

Dimensions in mm (inches)

**HIGH VOLTAGE  
SILICON NPN DARLINGTON  
POWER TRANSISTOR**



**FEATURES**

- Short Switching Times
- High Reverse Voltage

**Applications.**

This device is especially suitable for switching-control amplifiers, power gates, switching regulators, power-switching circuits converters, inverters and control circuits.

**TO-204AA (TO-3)**

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

**ABSOLUTE MAXIMUM RATINGS** ( $T_{case} = 25^{\circ}C$  unless otherwise stated)

$V_{CEO}$	Collector – Emitter Voltage	400V
$I_C$	Collector Current	15A
$I_{CM}$	Peak Collector Current	20A
$I_{BM}$	Base Peak Current	4A
$P_{tot}$	Total Power Dissipation $T_{case} = 100^{\circ}C$	50W
$T_{stg}, T_j$	Maximum Junction and Storage Temperature Range	-65 to 175°C
$R_{qJC}$	Thermal Resistance Junction To Case	1.5°C / W

Semelab Plc reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by Semelab is believed to be both accurate and reliable at the time of going to press. However Semelab assumes no responsibility for any errors or omissions discovered in its use. Semelab encourages customers to verify that datasheets are current before placing orders.

**ELECTRICAL CHARACTERISTICS** ( $T_{case} = 25^{\circ}C$  unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
<b>ELECTRICAL CHARACTERISTICS</b>					
$V_{CEO(BR)*}$ Collector– Emitter Breakdown Voltage	$I_C = 500mA$ $I_B = 0$	400			V
$I_{CEO}$ Collector Cut–Off Current	$V_{CE} = 400V$ $I_B = 0$			250	$\mu A$
				2.0	mA
$V_{CE(sat)*}$ Collector – Emitter Saturation Voltage	$I_C = 10A$ $I_B = 0.15A$			2.0	V
				2.9	
$h_{FE*}$ DC Current Gain	$I_C = 7A$ $V_{CE} = 1.5V$	100			-
	$I_C = 15A$ $V_{CE} = 5V$	20			
$V_F$ Diode Forward Voltage	$I_C = -10A$			1.8	V

\* Pulse test  $t_p = 300\mu s$  ,  $\delta < 2\%$