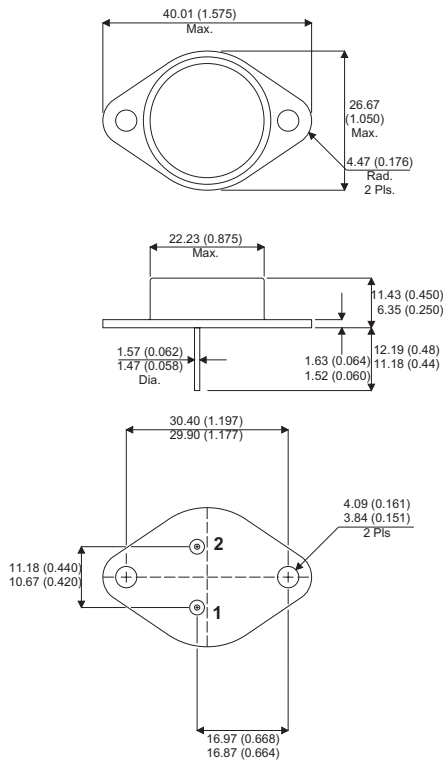


**MECHANICAL DATA**

Dimensions in mm



**TO3 (TO-204AA)**

Pin 1 – Base      Pin 2 – Emitter      Case – Collector

**NPN POWER TRANSISTOR**

**FEATURES**

- High Voltage
- High Speed

**APPLICATIONS**

- CONVERTERS
- INVERTERS
- SWITCHING REGULATORS
- MOTOR CONTROLS

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

$V_{CESM}$	Collector – Emitter Voltage ( $V_{BE} = 0$ , peak value)	1000V
$V_{CEO}$	Collector – Emitter Voltage (Open Base)	450V
$I_C$	Collector Current	15A
$I_{CM}$	Collector Current (Peak Value) $t_p < 2ms$	30A
$I_B$	Base Current (d.c.)	6A
$I_{BM}$	Base Current (Peak Value) $t_p < 2ms$	9A
$P_{tot}$	Total Power Dissipation up to $T_{mb} = 25^{\circ}C$	175W
$T_{stg}$	Storage Temperature	-65 to +200°C
$T_J$	Junction Temperature	200°C
$R_{\theta J-MB}$	Thermal Resistance (junction-mounting base)	1.0°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.

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Issue 1

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$V_{CEOsust}$ Collector Emitter Sustaining Voltage	$I_C = 100mA$ $I_{Boff} = 0$ $L = 25mH$	450			V
$I_{CES}$ Collector Cut-Off Current	$V_{CE} = V_{CESMmax}$ ; $V_{BE} = 0$ $T_C = 125^{\circ}C$			1 4	mA
$I_{EBO}$ Emitter Cut-Off Current	$V_{EB} = 9V$ $I_C = 0$			10	mA
$V_{CE(sat)}$ Collector – Emitter Saturation Voltage	$I_C = 8A$ $I_B = 1.6A$			1.5	V
$V_{BE(sat)}$ Base – Emitter Saturation Voltage	$I_C = 8A$ $I_B = 1.6A$			1.6	V

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

$t_{on}$ On Time	$I_C = 8A$			1	$\mu S$
$t_s$ Storage Time	$I_{Bon} = -I_{Boff} = 1.6A$			4	
$t_f$ Fall Time				0.8	