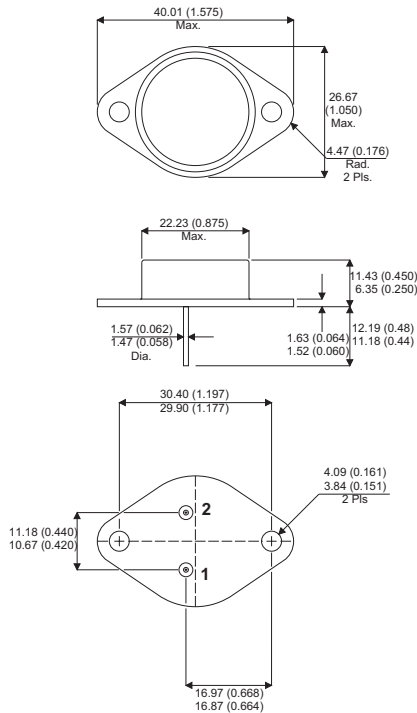


MECHANICAL DATA

Dimensions in mm

NPN POWER TRANSISTOR



TO3 (TO-204AA)

Pin 1 – Base Pin 2 – Emitter Case – Collector

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

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

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

t_{on} On Time	$I_{\text{C}} = 8\text{A}$			1	μS
t_{s} Storage Time	$I_{\text{Bon}} = -I_{\text{Boff}} = 1.6\text{A}$			4	
t_{f} Fall Time				0.8	

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