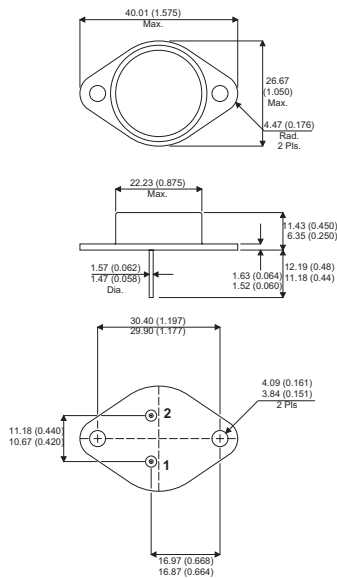


MECHANICAL DATA

Dimensions in mm(inches)



**FAST SWITCHING
POWER TRANSISTOR**

FEATURES

- FAST SWITCHING TIMES
- LOW SWITCHING LOSSES
- LOW BASE CURRENT REQUIREMENTS
- VERY LOW SATURATION VOLTAGE AND HIGH GAIN

TO-3 (TO-204AA)

PIN 1 — Base
PIN 2 — Emitter
Case is Collector

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

V_{CEV}	Collector – Emitter Voltage ($V_{BE} = -1.5V$)	400V
V_{CEO}	Collector – Emitter Voltage ($I_B = 0$)	250V
V_{EBO}	Emitter – Base Voltage ($I_C = 0$)	7V
I_C	Collector Current	20A
I_{CM}	Peak Collector Current ($t_p = 10$ ms)	30A
I_B	Base Current	4A
I_{BM}	Base Peak Current ($t_p = 10$ ms)	6A
P_{tot}	Total Power Dissipation at $T_{case} \leq 25^{\circ}C$	150W
T_{stg}	Storage Temperature	-65 to 200°C
T_j	Junction Temperature	200°C

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
$V_{CEO(sus)^*}$ Collector - Emitter Sustaining Voltage	$I_C = 200mA$ $L = 25mH$ $I_B = 0$	300			V
$V_{(BR)EBO}$ Emitter – Base Voltage	$I_E = 50mA$	7			
$V_{CE(sat)^*}$ Collector Emitter Saturation Voltage	$I_C = 7A$ $I_B = 0.7A$ $T_J = 100^{\circ}C$			0.9 1.9	
$V_{BE(sat)^*}$ Base Emitter Saturation Voltage	$I_C = 7A$ $I_B = 0.7A$			1.3	mA
I_{CER} Collector Cut-off Current	$V_{CE} = 400V$ $(R_{BE} = 10\Omega)$			0.5	
I_{CEV} Collector Cut-off Current	$V_{CE} = 400V$ $V_{BE} = -1.5V$ $T_C = 125^{\circ}C$			0.5 2.0	
I_{EBO} Emitter Cut-off Current	$I_C = 0$ $V_{EB} = 5V$			1	

NOTES

* Pulse Test: $t_p = 300\mu s$, $\delta \leq 2\%$

THERMAL CHARACTERISTICS

$R_{\theta JC}$ Thermal Resistance Junction to Case			1.17	$^{\circ}C/W$
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