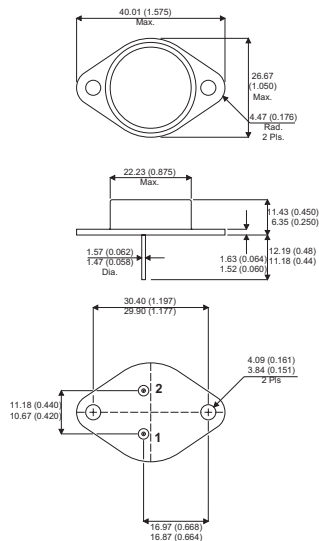


MECHANICAL DATA

Dimensions in mm(inches)



TO-3 (TO-204AA)

PIN 1 — Base

PIN 2 — Emitter

Case is Collector

FAST SWITCHING POWER TRANSISTOR

FEATURES

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

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

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Issue 1

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$V_{\text{CEO(sus)}}^*$ Collector - Emitter Sustaining Voltage	$I_{\text{C}} = 200\text{mA}$ $L = 25\text{mH}$ $I_{\text{B}} = 0$	300			V
$V_{(\text{BR})\text{EBO}}$ Emitter – Base Voltage	$I_{\text{E}} = 50\text{mA}$	7			
$V_{\text{CE(sat)}}^*$ Collector Emitter Saturation Voltage	$I_{\text{C}} = 7\text{A}$ $I_{\text{B}} = 0.7\text{A}$ $T_{\text{J}} = 100^{\circ}\text{C}$			0.9	
				1.9	
$V_{\text{BE(sat)}}^*$ Base Emitter Saturation Voltage	$I_{\text{C}} = 7\text{A}$ $I_{\text{B}} = 0.7\text{A}$			1.3	
I_{CER} Collector Cut-off Current	$V_{\text{CE}} = 400\text{V}$ $(R_{\text{BE}} = 10\Omega)$			0.5	mA
I_{CEV} Collector Cut-off Current	$V_{\text{CE}} = 400\text{V}$ $V_{\text{BE}} = -1.5\text{V}$ $T_{\text{C}} = 125^{\circ}\text{C}$			0.5	
				2.0	
I_{EBO} Emitter Cut-off Current	$I_{\text{C}} = 0$ $V_{\text{EB}} = 5\text{V}$			1	

NOTES

* Pulse Test: $t_{\text{p}} = 300\mu\text{s}$, $\delta \leq 2\%$

THERMAL CHARACTERISTICS

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