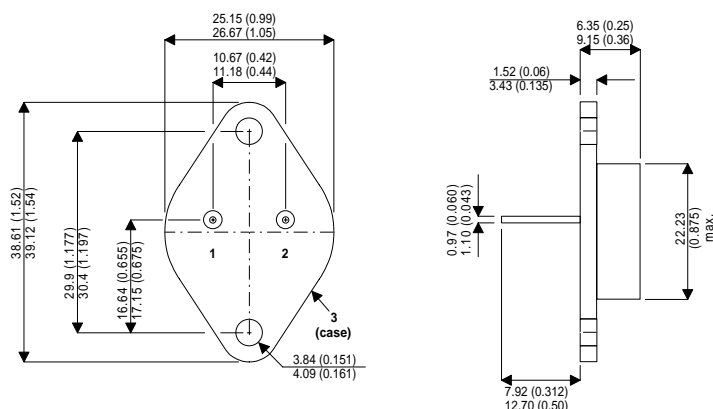


MECHANICAL DATA

Dimensions in mm

**HIGH CURRENT
NPN SILICON TRANSISTOR**
FEATURES

- HIGH SWITCHING CURRENTS
- HIGH RELIABILITY
- CECC SCREENING OPTIONS
- SPACE QUALITY LEVELS OPTIONS
- JAN LEVEL SCREENING OPTIONS


APPLICATIONS

- SWITCHING REGULATORS
- LINEAR APPLICATIONS

TO3 (TO-204AA)

Pin 1 – Base

Pin 2 – Emitter

Case – Collector

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

V_{CBO}	Collector – Base Voltage	300V
V_{CEO}	Collector – Emitter Voltage	180V
V_{EBO}	Emitter – Base Voltage	10V
I_C	Collector Current	6A
I_B	Base Current	3A
P_{tot}	Total Dissipation at $T_{case} = 25^{\circ}C$	87.5W
T_{stg}	Storage Temperature	-65 to +200°C
T_J	Maximum Operating Junction Temperature	200°C
$R_{\theta JC}$	Thermal Resistance (junction-case)	2°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		TestConditions	Min.	Typ.	Max.	Unit
I_{CEO}	Collector Emitter Cut-Off Current	$V_{CE} = 180V$ $I_B = 0A$			1.0	mA
I_{CES}	Collector Emitter Cut-Off Current	$V_{CE} = 250V$ $V_{BE} = 0V$			1.0	
I_{EBO}	Emitter Base Cut-Off Current	$V_{EB} = 10V$ $I_C = 0A$			1.0	
$V_{(BR)CEO}^*$	Collector Emitter Breakdown Voltage	$I_C = 50mA$ $I_B = 0A$	180			V
$V_{(BR)CBO}^*$	Collector Base Breakdown Voltage	$I_C = 3mA$	300			
$V_{CE(sat)}^*$	Collector Emitter Saturation Voltage	$I_C = 2A$ $I_B = 0.25A$			0.6	
$V_{BE(sat)}^*$	Base Emitter Saturation Voltage	$I_C = 2A$ $I_B = 0.25A$			1.2	
h_{FE}	DC Current Gain	$I_C = 1A$ $V_{CE} = 4V$		90		
		$I_C = 2A$ $V_{CE} = 4V$	75	82	180	
f_T	Transition Frequency	$I_C = 0.5A$ $V_{CE} = 15V$ $f = 10MHz$	10			MHz
t_{on}	Turn On Time	$I_C = 5A$ $I_{B1} = 1A$			1	μS
t_{off}	Turn Off Time	$I_C = 5A$ $I_{B1} = -I_{B2} = 1A$			6	

*) Pulse test : Pulse Width < 300 μs ,Duty Cycle < 2%