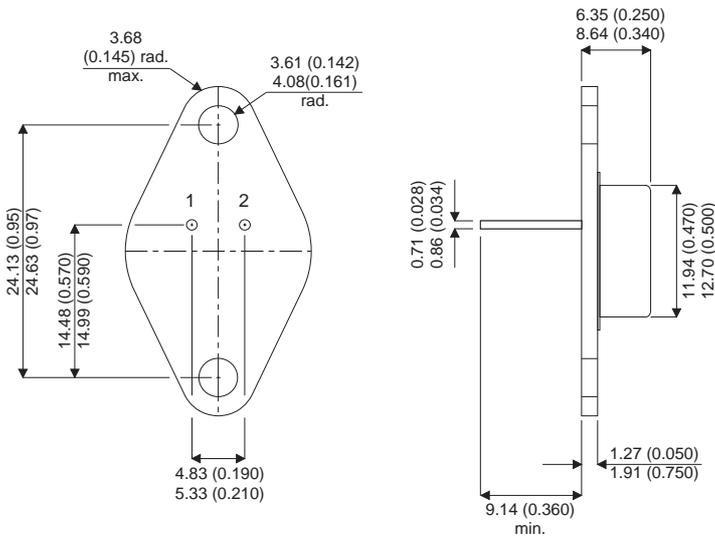


MECHANICAL DATA
Dimensions in mm

POWER TRANSISTORS
NPN SILICON



FEATURES

- Hermetically Packaged.
- Low Saturation Voltage
- High Gain

TO66 Package (TO-213AA)

Pin 1 = Base Pin 2 = Emitter Case = Collector

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

V_{CBO}	Collector – Base Voltage	250V
V_{CEO}	Collector – Emitter Voltage ($I_B = 0$)	225V
V_{EBO}	Emitter – Base Voltage ($I_C = 0$)	6V
I_C	Collector Current	1A
$I_{C(PK)}$	Peak Collector Current	2A
I_B	Base Current	0.5A
P_D	Total Device Dissipation at $T_{case} = 25^{\circ}C$	20W
	Derate $25^{\circ}C$	0.133W/ $^{\circ}C$
T_{stg}	Operating and Storage Temperature Range	-65 to $200^{\circ}C$

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
ELECTRICAL CHARACTERISTICS					
$V_{CEO(BR)*}$	Collector– Emitter Breakdown Voltage	$I_C = 5mA$ $I_B = 0$	225		V
I_{CBO}	Collector Base Cut–Off Current	$V_{CB} = 250V$ $I_E = 0$		0.1	mA
I_{CEO}	Collector Emitter Cut–Off Current	$V_{CE} = 125V$ $I_B = 0$		0.25	mA
I_{CEV}	Collector Cut–Off Current	$V_{CE} = 250V$ $V_{BE(OFF)} = 1.5V$		0.5	mA
		$V_{CE} = 125V$ $V_{BE(OFF)} = 1.5V$ $T_C = 100^{\circ}C$		1.0	mA
I_{EBO}	Emitter Base Cut–Off Current	$V_{EB} = 6V$		0.1	mA
h_{FE*}	DC Current Gain	$I_C = 50mA$ $V_{CE} = 10V$	30		—
		$I_C = 100mA$ $V_{CE} = 10V$	40	200	
		$I_C = 250mA$ $V_{CE} = 10V$	25		
$V_{CE(sat)*}$	Collector – Emitter Saturation Voltage	$I_C = 250mA$ $I_B = 25mA$		2.5	V
$V_{BE(on)*}$	Base – Emitter on Voltage	$I_C = 100mA$ $V_{CE} = 10V$		1.0	
DYNAMIC CHARACTERISTICS					
f_T	Transition Frequency	$I_C = 100mA$ $V_{CE} = 10V$ $f = 10MHz$	10		MHz
C_{ob}	Output Capacitance	$V_{CB} = 100V$ $I_E = 0$ $f = 100KHz$		20	pF
h_{fe}	Small Signal Current Gain	$I_C = 100mA$ $V_{CE} = 20V$ $f = 1KHz$	35		—

* Pulse Width $\leq 300\mu s$, Duty Cycle $< 2\%$