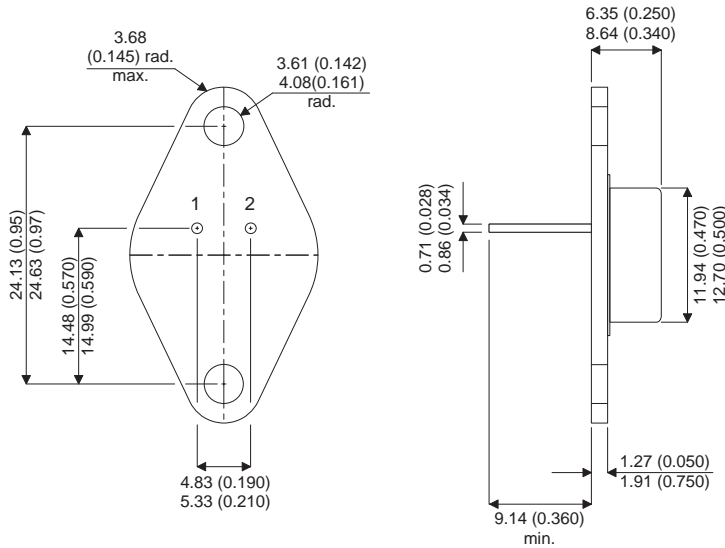


NPN POWER SILICON TRANSISTOR IN A HERMETICALLY SEALED METAL PACKAGE

MECHANICAL DATA
Dimensions in mm (inches)



TO-66 (TO-213AA)

Underside View

PIN 1 – Base PIN 2 – Emitter PIN 3 – Collector

FEATURES

- $V_{CEO} = 75V$
- $I_C = 7A$

APPLICATIONS:

All Semelab hermetically sealed products can be processed in accordance with the requirements of BS, CECC and JAN, JANTX, JANTXV and JANS specifications

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

V_{CEO}	Collector-Emitter Voltage ($I_B=0$)	75V
V_{CBO}	Collector -Base Voltage ($I_E=0$)	120V
V_{EBO}	Emitter-Base Voltage ($I_C=0$)	7V
I_B	Continuous Base Current	5A
I_C	Continuous Collector Current	7A
P_D	Power Dissipation	$T_{case} = 25^{\circ}C$ 35W
T_j, T_{stg}	Operating & Storage Temperature Range	-65 to +200°C
R_{JC}	Thermal Resistance Junction to Case	5°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	Test Conditions	Min.	Typ.	Max.	Unit
$V_{(BR)CEO}^*$ Collector-Emitter Breakdown Voltage	$I_C=0.2A$	75			V
I_{CEO}^* Collector-Emitter Cut-Off Current	$V_{CE}=50V$			5.0	V
I_{CEX}^* Collector-Emitter Cut-Off Current	$V_{CE}=100V$ $V_{BE}=1.5V$			4.0	mA
I_{CBO}^* Collector-Base Cut-Off Current	$V_{CB}=120V$			25	
I_{EBO}^* Emitter-Base Cut-Off Current	$V_{EB}=7V$			10	
h_{FE}^* DC Current Gain	$I_C=0.5A$ $V_{CE}=5V$	40			—
	$I_C=4A$ $V_{CE}=5V$	20		80	
	$I_C=4A$ $V_{CE}=2V$	12		100	
$V_{CE(sat)}^*$ Collector-Emitter Saturation Voltage	$I_C=4A$ $I_B=0.4A$			1.2	V
$V_{BE(sat)}^*$ Base-Emitter Saturation Voltage	$I_C=4A$ $I_B=0.4A$			2.0	
$V_{BE(on)}^*$ Base-Emitter Saturation Voltage	$I_C=4A$ $V_{CE}=2V$			1.8	

* Pulse Width < 300 μ s, Duty Cycle <2%

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$ h_{fe} $ Small Signal Current Gain (f=10MHz)	$I_C=0.5A$ $V_{CE}=10V$	4	20		—
C_{obo} Output Capacitance (0.1 ` f ` 1MHz)	$I_E=0A$ $V_{CB}=10V$			175	pF

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
t_{on} Turn On Time	$I_C=0.2A$ $V_{CC}=30V$			0.44	μ s
	$I_B=0.4A$				
t_{off} Turn Off Time	$I_C=0.2A$ $V_{CC}=30V$			1.22	
	$I_B=-I_B=0.4A$				

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