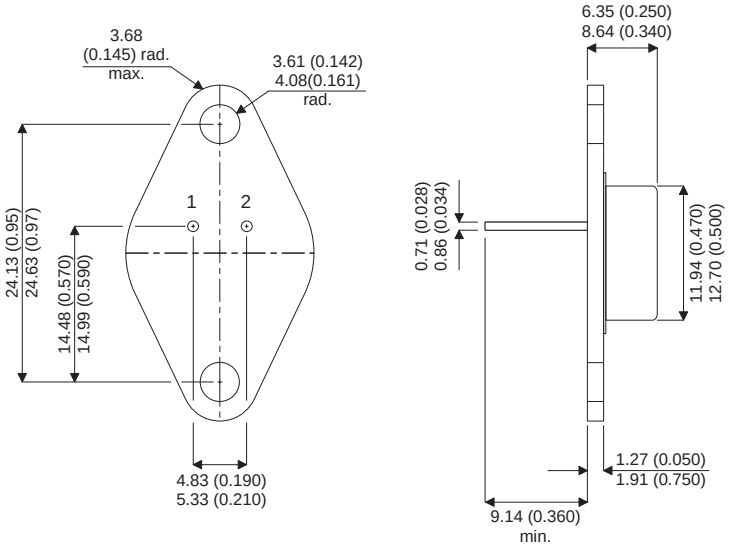
2N3879

NPN POWER SILICON TRANSISTOR IN A HERMETICALLY SEALED METAL PACKAGE

MECHANICAL DATA
Dimensions in mm (inches)



T0-66 (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°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	Tcase = 25°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.

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ELECTRICAL CHARACTERISTICS (T_{case} = 25°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 < 300µs, Duty Cycle <2%

DYNAMIC CHARACTERISTICS (T_{case} = 25°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°C unless otherwise stated)

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

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