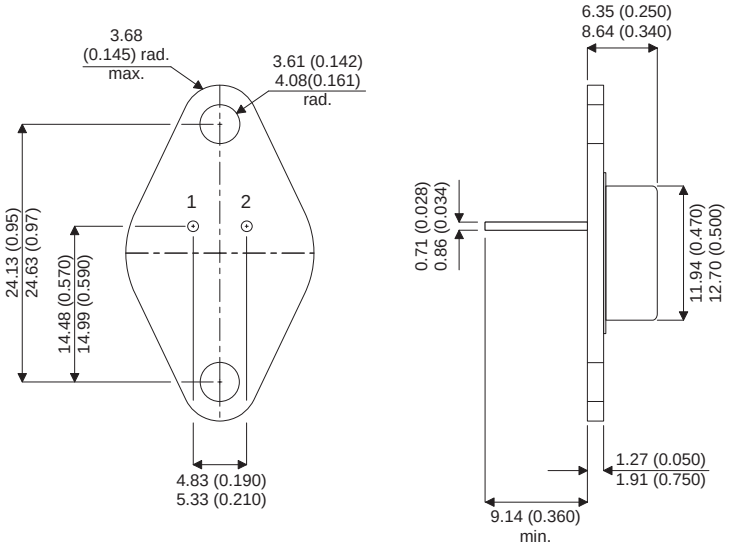
2N3879

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

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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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