



#### **MECHANICAL DATA**

Dimensions in mm (inches)

## 

# PNP SILICON TRANSISTORS

#### **FEATURES**

- Hermetically sealed ceramic surface mount package
- Small footprint
- Simple drive requirements

#### LCC4 CERAMIC SURFACE MOUNT PACKAGE

#### **Underside View**

Pads 6, 7, 8, 9, 10, 11, 12, 13. Emitter
Pads 4,5 Base
Pads 1,2,15,16,17,18 Collector
Pads 3,14 Not Connected

### **ABSOLUTE MAXIMUM RATINGS** $T_{CASE} = 25$ °c unless otherwise stated

$V_{CBO}$	Collector – Base Voltage(I <sub>E</sub> = 0)	100V
$V_{CEO}$	Collector – Emitter Voltage (I <sub>B</sub> = 0)	100V
$V_{EBO}$	Emitter – Base Voltage ( $I_C = 0$ )	6V
I <sub>C</sub>	Collector Current	5A
I <sub>B</sub>	Base Current	1A
$P_{tot}$	Total Dissipation at T <sub>amb</sub> ≤ 25°C	1W
	derate above 25°C	5.71mW/°C
$P_{tot}$	Total Dissipation at T <sub>amb</sub> ≤ 25°C	10W
	derate above 25°C	57.1mW/°C
T <sub>stg</sub>	Storage Temperature Range	−55 to +200°C
Tj	Junction temperature	200°C

Semelab PIc 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.

E-mail: sales@semelab.co.uk

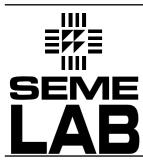
**Semelab plc.** Telephone +44(0)1455 556565. Fax +44(0)1455 552612.

Website: http://www.semelab.co.uk

Document Number 2946

Issue: 3





### **ELECTRICAL CHARACTERISTICS** (T<sub>case</sub> = 25°C unless otherwise stated)

	Parameter	Test Conditions		Min.	Тур.	Max.	Unit	
V <sub>(BR)CEO</sub>	Collector Emitter Breakdown Voltage	I <sub>C</sub> = 50mA pulsed		100			V	
I <sub>CBO</sub>	Collector-Base Cut Off Current	I <sub>E</sub> = 0	V <sub>CB</sub> = 100V			10	μΑ	
I <sub>CEX</sub>	Collector-Emitter Cut Off Current	V <sub>BE</sub> = 1.5V	V <sub>CE</sub> = 90V			10	μΑ	
			T <sub>A</sub> = 150°C			1	mA	
I <sub>CEO</sub>	Collector-Emitter Cut Off Current	$I_B = 0$	V <sub>CE</sub> = 100V			100	μΑ	
I <sub>EBO</sub>	Collector-Emitter Cut Off Current	$V_{EB} = 6V$	I <sub>C</sub> = 0			100	μΑ	
V <sub>CE(sat)</sub>	Collector Emitter Saturation Voltage	I <sub>C</sub> = 2A	I <sub>B</sub> = 0.2A			0.7	V	
		I <sub>C</sub> = 5A	I <sub>B</sub> = 0.5A			1.2		
V <sub>BE(sat)</sub>	Base Emitter Voltage	I <sub>C</sub> = 2A	I <sub>B</sub> = 0.2A			1.2		
		I <sub>C</sub> = 5A	I <sub>B</sub> = 0.5A			1.8		
h <sub>FE</sub>	DC Current Gain	$I_{\rm C} = 0.5A$	V <sub>CE</sub> = 2V	60			_	
		I <sub>C</sub> = 2A	V <sub>CE</sub> = 2V	60		240		
			$T_C = -55^{\circ}C$	12				
		I <sub>C</sub> = 5A	V <sub>CE</sub> = 2V	30				
h <sub>fe</sub>	Magnitude of Common Emitter Small Signal Short circuit forward Current Transfer ratio.	V <sub>CB</sub> = 5V f = 10MHz	I <sub>C</sub> = 0.5A	3.0		15		
C <sub>IBO</sub>	Input Capacitance, Output Open Circuited	$V_{CB} = 10V$ 100kHz <f<1< td=""><td>_</td><td></td><td></td><td>1250</td><td colspan="2"> pF</td></f<1<>	_			1250	pF	
C <sub>OBO</sub>	Open Circuit Output Capacitance	V <sub>CB</sub> = 10V 100kHz <f<1< td=""><td>_</td><td></td><td></td><td>300</td><td></td></f<1<>	_			300		

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.

Semelab plc. Telephone +44(0)1455 556565. Fax +44(0)1455 552612. Document Number 2946
E-mail: sales@semelab.co.uk Website: http://www.semelab.co.uk Issue: 3