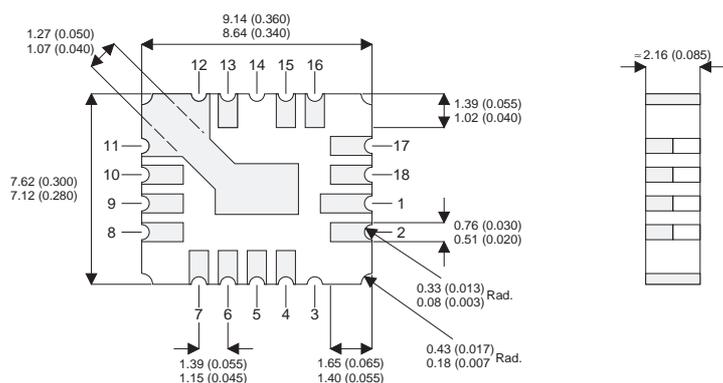


**MECHANICAL DATA**

Dimensions in mm (inches)

**NPN 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. **Source**
- Pads 4,5 **Gate**
- Pads 1,2,15,16,17,18 **Drain**
- Pads 3,14 **Not Connected**

**ABSOLUTE MAXIMUM RATINGS**  $T_{CASE} = 25^{\circ}C$  unless otherwise stated

$V_{CBO}$	Collector – Base Voltage ( $I_E = 0$ )	100V
$V_{CEO}$	Collector – Emitter Voltage ( $I_B = 0$ )	100V
$V_{EBO}$	Emitter – Base Voltage ( $I_C = 0$ )	6V
$I_C$	Collector Current	5A
$I_{CM}$	Collector Peak Current	7A
$I_B$	Base Current	1A
$P_{tot}$	Total Dissipation at $T_{case} \leq 25^{\circ}C$	6W
	$T_{amb} \leq 25^{\circ}C$	1W
$T_{stg}$	Storage Temperature Range	-65 to +200°C
$T_j$	Junction temperature	200°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.

**THERMAL DATA**

R <sub>thj-case</sub>	Thermal Resistance Junction-case	Max	29.2	°C/W
R <sub>thj-amb</sub>	Thermal Resistance Junction-ambient	Max	175	°C/W

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I <sub>CBO</sub>	Collector Cut Off Current I <sub>E</sub> = 0    V <sub>CB</sub> = 100V			10	μA
I <sub>CEX</sub>	Collector Cut Off Current V <sub>BE</sub> = 1.5V    V <sub>CE</sub> = 90V T <sub>case</sub> = 150°C			10	μA
				1	mA
I <sub>CEO</sub>	Collector Cut Off Current I <sub>B</sub> = 0    V <sub>CE</sub> = 90V			100	μA
V <sub>CEO(sus)*</sub>	Collector Emitter Sustaining Voltage I <sub>B</sub> = 0    I <sub>C</sub> = 50mA			100	V
V <sub>CE(sat)*</sub>	Collector Emitter Saturation Voltage I <sub>C</sub> = 2A    I <sub>B</sub> = 0.2A I <sub>C</sub> = 5A    I <sub>B</sub> = 0.5A			0.7	V
				1.2	
V <sub>BE(sat)*</sub>	Base Emitter Voltage I <sub>C</sub> = 2A    I <sub>B</sub> = 0.2A I <sub>C</sub> = 5A    I <sub>B</sub> = 0.5A			1.2	V
				1.8	
h <sub>FE*</sub>	DC Current Gain I <sub>C</sub> = 0.5A    V <sub>CE</sub> = 2V I <sub>C</sub> = 2A    V <sub>CE</sub> = 2V I <sub>C</sub> = 5A    V <sub>CE</sub> = 2V	2N5338	30		—
		2N5339	60		
		2N5338	30	150	
		2N5339	60	240	
		2N5338	20		
		2N5339	40		
f <sub>T</sub>	Transistion Frequency I <sub>C</sub> = 0.5mA    V <sub>CE</sub> = 10V	30			MHz
C <sub>CBO</sub>	Collector Base Capacitance I <sub>E</sub> = 0    V <sub>CB</sub> = 10V f = 0.1MHz			250	pF
t <sub>on</sub>	Turn-on Time I <sub>C</sub> = 2A    V <sub>CC</sub> = 40V I <sub>B1</sub> = 0.2mA			200	ns
t <sub>s</sub>	Storage Time I <sub>C</sub> = 2A    V <sub>CC</sub> = 40V			2.5	μs
t <sub>f</sub>	Fall Time I <sub>B1</sub> = - I <sub>B2</sub> = 0.2A			200	ns

\* Pulse test t<sub>p</sub> = 300μs , Duty Cycle 1.5%