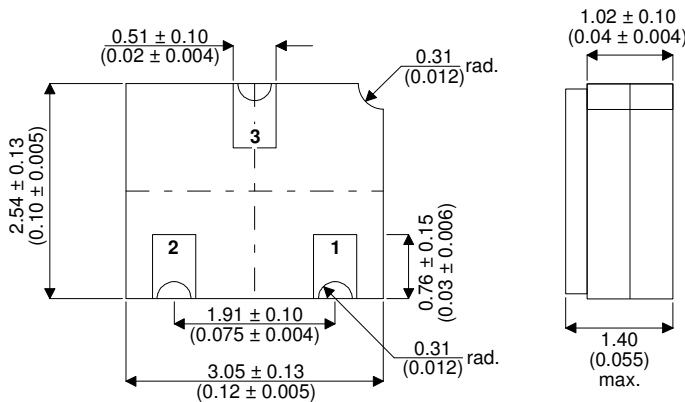


## MECHANICAL DATA

Dimensions in mm (inches)

## HIGH SPEED MEDIUM POWER PNP SWITCHING TRANSISTOR



### LCC1 PACKAGE

Pad 1 - Base Pad 2 - Emitter Pad 3 - Collector

## FEATURES

- SILICON PNP TRANSISTOR.
- HIGH SPEED SWITCHING
- SCREENING OPTIONS AVAILABLE

## APPLICATIONS

- SMALL SIGNAL GENERAL PURPOSE AND SWITCHING APPLICATIONS

## ABSOLUTE MAXIMUM RATINGS

$T_{CASE} = 25^{\circ}C$  unless otherwise stated

$V_{CBO}$	Collector - Base Voltage	50V
$V_{CEO}$	Collector - Emitter Voltage ( $I_B = 0$ )	40V
$V_{EBO}$	Emitter - Base Voltage ( $I_C = 0$ )	5V
$I_C$	Continuous Collector Current	600mA
$P_D$	Total Power Dissipation at $T_{Amb} = 25^{\circ}C$ Derate Above $25^{\circ}C$	400mW 2.7mW/ $^{\circ}C$
$T_{stg}, T_J$	Operating and Storage Temperature Range	-55 to +175 $^{\circ}C$

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 CHARACTERISTICS**
**Max.**
**Unit**

$R_{thj-Amb}$	Thermal resistance to ambient	375	°C/W
---------------	-------------------------------	-----	------

**ELECTRICAL CHARACTERISTICS** ( $T_{Amb} = 25^{\circ}C$  unless otherwise stated)

Parameter		Test Conditions		Min.	Typ.	Max.	Unit
$V_{(BR)CBO}^*$	Collector-Base Breakdown Voltage	$I_C = 10\mu A$	$I_E = 0$	50			V
$V_{(BR)CEO}^*$	Collector-Emitter Breakdown Voltage	$I_C = 10mA$	$I_B = 0$	40			
$I_{CBO}$	Collector to Base Cut-Off Current	$I_E = 0$	$V_{CB} = 50V$			10	$\mu A$
		$I_E = 0$	$V_{CB} = 30V$			1	
			$T_{amb} = 150^{\circ}C$			100	
$I_{EBO}$	Emitter to Base Cut-Off Current	$I_C = 0$	$V_{EB} = 5V$			100	
$I_{CER}$	Collector to Emitter Cut-Off Current	$R_{BE} \leq 10\Omega$	$V_{CE} = 50V$			10	mA
$h_{FE}^*$	DC Current Gain	$V_{CE} = 10V$	$I_C = 150mA$	30		100	
			$I_C = 5mA$	25			
$V_{CE(SAT)}^*$	Collector To Emitter Saturation Voltage	$I_C = 150mA$	$I_B = 15mA$			1.3	V
$V_{BE(SAT)}^*$	Base To Emitter Saturation Voltage					1.5	

**DYNAMIC CHARACTERISTICS**

$C_{OBO}$	Output Capacitance	$V_{CB} = 10V$ $f = 1.0MHz$	$I_E = 0$			45	$pF$
$C_{IBO}$	Input Capacitance	$V_{EB} = 0.5V$ $f = 1.0MHz$	$I_C = 0$			80	
$ h_{fe} $	Small Signal Current Gain	$I_C = 50mA$ $f = 20MHz$	$V_{CE} = 10V$	3.0		20	
$t_d$	Delay Time	$V_{CC} = 30V$ $I_C = 150mA$ $I_{B1} - I_{B2} = 15mA$				15	nS
$t_r$	Rise Time					25	
$t_s$	Storage Time					80	
$t_f$	Fall Time					25	

\* Pulse test  $t_p = 300\mu s$ ,  $\delta < 2\%$

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.