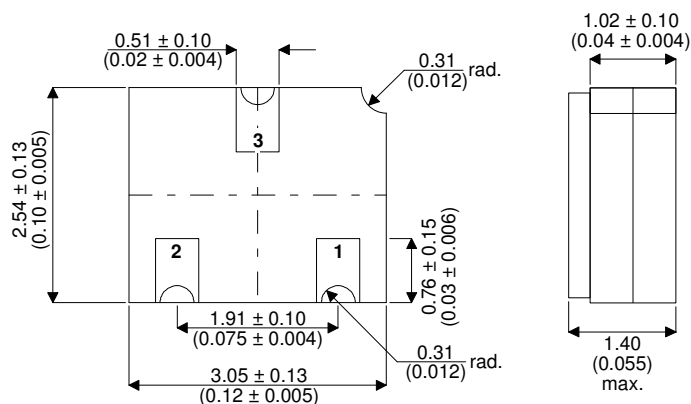


MECHANICAL DATA

Dimensions in mm (inches)



LCC1 PACKAGE

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

HIGH SPEED MEDIUM POWER PNP SWITCHING TRANSISTOR

FEATURES

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

APPLICATIONS

- SMALL SIGNAL GENERAL PURPOSE AND SWITCHING APPLICATIONS

ABSOLUTE MAXIMUM RATINGS

$T_{CASE} = 25^{\circ}\text{C}$ 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 $T_{Amb} = 25^{\circ}\text{C}$	400mW
	Derate Above 25°C	$2.7\text{mW}/^{\circ}\text{C}$
T_{stg}, T_J	Operating and Storage Temperature Range	-55 to $+175^{\circ}\text{C}$

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.

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THERMAL CHARACTERISTICS

	Max.	Unit
$R_{th j-Amb}$ 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	μA
	$I_E = 0$ $V_{CB} = 30V$			1	
	$I_E = 0$ $T_{amb} = 150^{\circ}C$			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	$V_{CB} = 10V$ $I_E = 0$ $f = 1.0MHz$			45	pF
C_{IBO} Input Capacitance	$V_{EB} = 0.5V$ $I_C = 0$ $f = 1.0MHz$			80	
$ h_{fe} $ Small Signal Current Gain	$I_C = 50mA$ $V_{CE} = 10V$ $f = 20MHz$	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 $t_p = 300\mu s$, $\delta < 2\%$

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