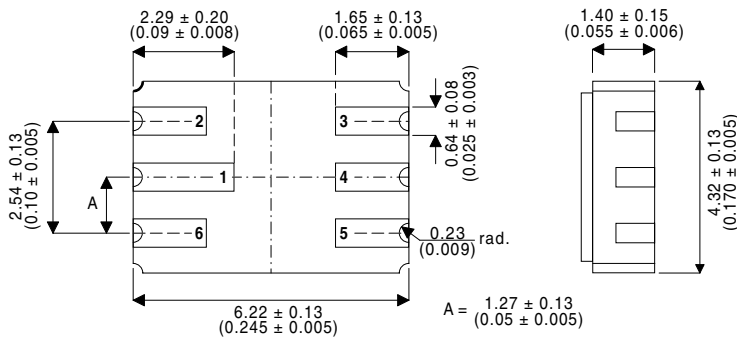


DUAL HIGH SPEED, MEDIUM POWER PNP GENERAL PURPOSE TRANSISTOR IN A HERMETICALLY SEALED CERAMIC SURFACE MOUNT PACKAGE

MECHANICAL DATA

Dimensions in mm (inches)



LCC2 PACKAGE
Underside View

PAD 1 - Collector 1
PAD 2 - Base 1
PAD 3 - Base 2

PAD 4 - Collector 2
PAD 5 - Emitter 2
PAD 6 - Emitter 1

FEATURES

- SILICON PLANAR EPITAXIAL DUAL PNP TRANSISTOR
- HERMETIC CERAMIC SURFACE MOUNT PACKAGE
- CECC SCREENING OPTIONS AVAILABLE
- SPACE QUALITY LEVELS OPTIONS
- HIGH SPEED SATURATED SWITCHING

APPLICATIONS:

For high reliability general purpose applications requiring small size and low weight devices.

ABSOLUTE MAXIMUM RATINGS ($T_{case} = 25^{\circ}C$ unless otherwise stated)		PER SIDE	TOTAL
V_{CBO}	Collector – Base Voltage	-12V	
V_{CEO}	Collector – Emitter Voltage	-12V	
V_{EBO}	Emitter – Base Voltage	-4.5V	
I_C	Collector Current	-200mA	
P_D	Device Dissipation	300mW	500mW
P_D	Derate above 50°C	2mW / °C	3.3mW / °C
R_{ja}	Thermal Resistance Junction to Ambient	420°C / W	250°C / W
T_j	Max Junction Temperature	200°C	
T_{stg}	Storage Temperature	-65 to 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.

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$V_{(BR)CBO}^*$ Collector – Base Breakdown Voltage	$I_C = 10\mu\text{A}$ $I_E = 0$	- 12			V
$V_{(BR)CEO}$ Collector – Emitter Breakdown Voltage	$I_C = 10\text{mA}$ $I_B = 0$	- 12			
$V_{(BR)EBO}$ Emitter – Base Breakdown Voltage	$I_E = 100\mu\text{A}$ $I_C = 0$	- 4.5			
I_{CBO} Collector Cut-off Current	$V_{CB} = -10\text{V}$ $T_{amb} = 125^\circ\text{C}$			- 10	μA
I_{CES} Collector Cut-off Current	$V_{BE} = 0$ $V_{CE} = -10\text{V}$			- 50	nA
$V_{CE(sat)}$ Collector – Emitter Saturation Voltage	$I_C = -10\text{mA}$ $I_B = -1.0\text{mA}$			-0.130	V
	$I_C = -30\text{mA}$ $I_B = -3\text{mA}$			-0.190	
	$I_C = -100\text{mA}$ $I_B = -10\text{mA}$			- 0.450	
$V_{BE(sat)}$ Base – Emitter On Voltage	$I_C = -10\text{mA}$ $I_B = -1.0\text{mA}$	-0.78		-0.920	V
	$I_C = -30\text{mA}$ $I_B = -3\text{mA}$	-0.85		-1.15	
	$I_C = -100\text{mA}$ $I_B = -10\text{mA}$			-1.5	
h_{FE} DC Current Gain	$I_C = -10\text{mA}$ $V_{CE} = -0.3\text{V}$	30			—
	$I_C = -30\text{mA}$ $V_{CE} = -0.5\text{V}$	40		150	
	$I_C = -100\text{mA}$ $V_{CE} = -1.0\text{V}$	30			
	$I_C = -30\text{mA}$ $V_{CE} = -0.5\text{V}$ $T_{amb} = -55^\circ\text{C}$	20			
f_T Current Gain Bandwidth Product	$V_{CE} = -10\text{V}$ $f = 100\text{MHz}$ $I_C = -30\text{mA}$	800			MHz
C_{ebo} Emitter – Base – Capacitance	$V_{EB} = -5\text{V}$ $I_C = 0$ $f = 140\text{kHz}$			6	pF
C_{cbo} Collector – Base – Capacitance	$V_{CB} = -5\text{V}$ $I_E = 0$ $f = 140\text{kHz}$			4.5	pF
t_{on} Turn on Time	$I_C = -30\text{mA}$ $V_{CE} = -2\text{V}$ $I_{B2} = -1.5\text{mA}$			60	ns
t_{off} Turn off Time	$I_C = -30\text{mA}$ $V_{CE} = -2\text{V}$ $I_{B1} = I_{B2} = -1.5\text{mA}$			35	ns

* Pulse Test: $t_p \leq 300\mu\text{s}$, $\delta \leq 2\%$.