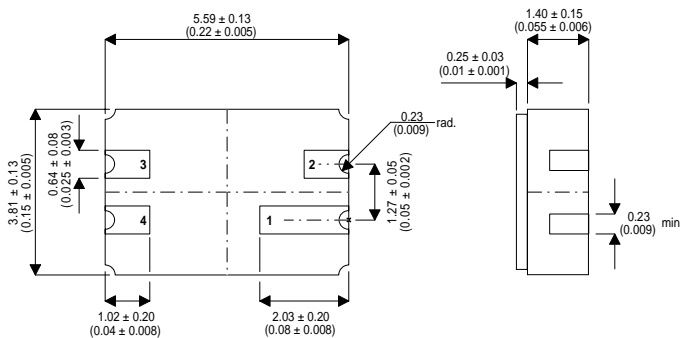


PNP PLANAR EPITAXIAL TRANSISTOR IN A HERMETICALLY SEALED CERAMIC SURFACE MOUNT PACKAGE FOR HIGH RELIABILITY APPLICATIONS

MECHANICAL DATA

Dimensions in mm (inches)



FEATURES

- Silicon Planar PNP Transistor
- Hermetic Ceramic Surface Mount Package
- CECC Screening Options
- Space quality Options

LCC3 PACKAGE Underside View

PAD 1 – Collector PAD 3 – Emitter
PAD 2 – N/C PAD 4 – Base

ABSOLUTE MAXIMUM RATINGS $T_{case} = 25^{\circ}C$ unless otherwise stated		2N5415	2N5416
V_{CBO}	Collector – Base Voltage ($I_E=0$)	-200V	-350V
$V_{CEO(sus)}$	Collector – Emitter Voltage ($I_B=0$)	-200V	-300V
V_{EBO}	Emitter – Base Voltage ($I_C=0$)	-4V	-6V
I_C	Collector Current	1A	
I_B	Base Current	0.5A	
P_{tot}	Total Device Dissipation at $T_A \leq 25^{\circ}C$	1W	
T_{stg}	Storage Temperature	-65 to +200°C	
T_J	Junction Temperature	175°C	
$R_{th-j-amb}$	Thermal Resistance Junction - Ambient	150°C/W	

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CBO} Collector Cut Off Current ($V_E = 0$)	$V_{CB} = -175V$ 2N5415			-50	μA
	$V_{CB} = -280V$ 2N5416			-50	
I_{CEO} Emitter Cut Off Current ($I_B = 0$)	$V_{CE} = -150V$			-50	μA
I_{EBO} Emitter Cut Off Current ($I_C = 0$)	$V_{EB} = -4V$ 2N5415			-20	μA
	$V_{EB} = -6V$ 2N5416			-20	
$V_{CEO(sus)*}$ Collector Emitter on Voltage ($I_B = 0$)	$I_C = -10mA$ 2N5415	-200			V
	$I_C = -10mA$ 2N5416	-300			V
$V_{CER(sus)*}$ Collector Emitter Breakdown Voltage	$I_C = -50mA$ $R_{BE} = 50\Omega$ 2N5416	-350			V
$V_{CE(sat)}$ Collector Base Breakdown Voltage	$I_C = -50mA$ $I_B = -5mA$			-0.5	V
V_{BE*} Base-Emitter Voltage	$I_C = -50mA$ $V_{CE} = -10V$			-1.5	V
h_{FE*} DC Current Gain	$I_C = -50mA$ $V_{CE} = -10V$ 2N5415	30		150	—
	$I_C = -50mA$ $V_{CE} = -10V$ 2N5416	30		120	
h_{fe} Small Signal Current Gain	$I_C = -5mA$ $V_{CE} = -10V$ $f = 1KHz$	25			—
C_{cbo} Collector-Base Capacitance	$I_E = 0$ $V_{CB} = -10V$ $f = 1MHz$			25	pF
f_T Transition Frequency	$I_C = -10mA$ $V_{CE} = -10V$ $f = 5MHz$	15			MHz

*Pulsed: duration = 300 μs , duty cycle 1.5%