

SILICON PLANAR EPITAXIAL PNP TRANSISTOR

2N5415CSM4
2N5416CSM4

- Silicon Planar PNP Transistor
- Hermetic Ceramic Surface Mounted Package.
- Hi-Rel Screening Options Available



ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise stated)

		2N5415	2N5416
V_{CBO}	Collector – Base Voltage	-200V	-350V
V_{CEO}	Collector – Emitter Voltage	-200V	-300V
V_{EBO}	Emitter – Base Voltage	-4V	-6V
I_C	Continuous Collector Current	1.0A	
I_B	Base Current	0.5A	
P_D	Total Power Dissipation at $T_A = 25^\circ\text{C}$	1.0W	
T_J	Junction Temperature Range	175°C	
T_{stg}	Storage Temperature Range	-65 to +200°C	

THERMAL PROPERTIES (Each Device)

Symbols	Parameters	Max.	Units
$R_{\theta JA}$	Thermal Resistance, Junction To Ambient	150	°C/W

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

Symbols	Parameters	Test Conditions	Min.	Typ.	Max.	Units
$V_{(BR)CEO}^{(1)}$	Collector-Emitter Breakdown Voltage	$I_C = -10\text{mA}$ 2N5415	-200			V
		$I_C = -10\text{mA}$ 2N5416	-300			
$V_{(BR)CER}^{(1)}$	Collector-Emitter Breakdown Voltage	$R_{BE} = 50\Omega$ $I_C = -50\text{mA}$ 2N5416	-350			
$I_{CEO}^{(1)}$	Collector Cut-off Current	$I_B = 0$ $V_{CE} = -150\text{V}$			-50	μA
$I_{CBO}^{(1)}$	Collector-Base Cut-off Current	$V_{CB} = -175\text{V}$ 2N5415			-50	
		$V_{CB} = -280\text{V}$ 2N5416			-50	
$I_{EBO}^{(1)}$	Emitter Cut-off Current	$V_{EB} = -4\text{V}$ 2N5415			-20	
		$V_{EB} = -6\text{V}$ 2N5416			-20	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -50\text{mA}$ $I_B = -5\text{mA}$			-0.5	V
$V_{BE}^{(1)}$	Base-Emitter Voltage	$I_C = -50\text{mA}$ $V_{CE} = -10\text{V}$			-1.5	
$h_{FE}^{(1)}$	DC Current Gain	$I_C = -50\text{mA}$ $V_{CE} = -10\text{V}$ 2N5415	30		150	-
		$I_C = -50\text{mA}$ $V_{CE} = -10\text{V}$ 2N5416	30		120	

DYNAMIC CHARACTERISTICS

Symbols	Parameters	Test Conditions	Min.	Typ.	Max.	Units
f_T	Transition Frequency	$I_C = -10\text{mA}$ $V_{CE} = -10\text{V}$ $f = 5\text{MHz}$	15			MHz
C_{obo}	Output Capacitance	$V_{CB} = -10\text{V}$ $I_E = 0$ $f = 1.0\text{MHz}$			25	pF
h_{fe}	Small Signal Current Gain	$I_C = -5\text{mA}$ $V_{CE} = -10\text{V}$ $f = 1.0\text{kHz}$	25			-

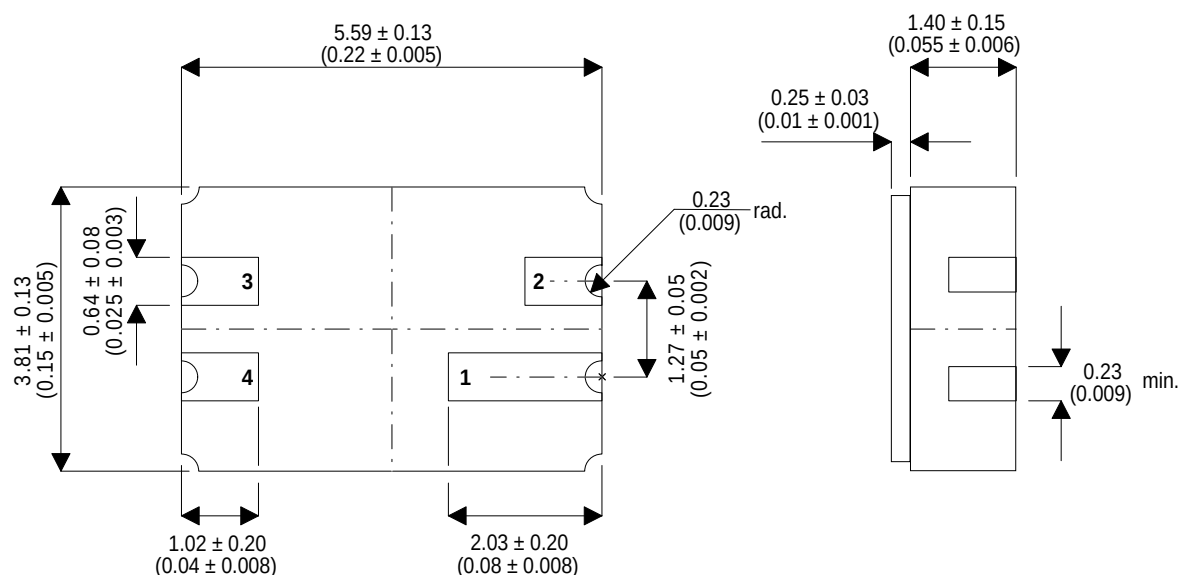
Notes

(1) Pulse Width $\leq 300\mu\text{s}$, $\delta \leq 2\%$

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MECHANICAL DATA

Dimensions in mm (inches)



LCC3 (MO-041BA)

Underside View

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