

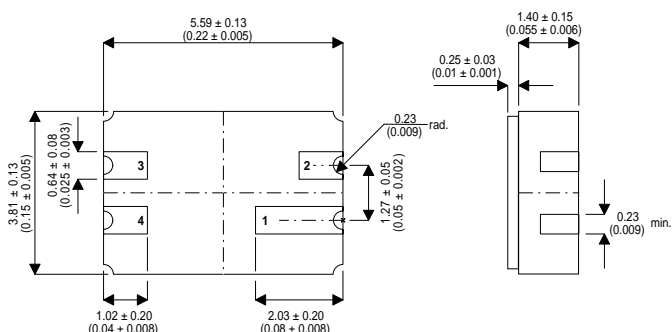
MECHANICAL DATA

Dimensions in mm (inches)

NPN SILICON TRANSISTOR

FEATURES

- NPN High Voltage Planar Transistor
- Hermetic Ceramic Surface Mount Package
- Full Screening Options Available



**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)

V_{CBO}	Collector – Base Voltage	140V
V_{CEO}	Collector – Emitter Voltage ($I_B = 0$)	90V
V_{CER}	Collector - Emitter Voltage	140V
V_{EBO}	Emitter – Base Voltage ($I_B = 0$)	7V
I_C	Collector Current	1A
P_D	Total Device Dissipation $T_A = 25^{\circ}C$	0.5W
	Derate above 25°C	2.86mW / °C
P_D	Total Device Dissipation $T_C = 25^{\circ}C$	1.8W
	Derate above 25°C	10.3mW / °C
T_{stg}	Storage Temperature	-65 to 200°C
$R_{\theta JA}$	Thermal Resistance Junction to Ambient	350°C/W
$R_{\theta JC}$	Thermal Resistance Junction to Case	97°C/W

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

Parameter		Test Conditions	Min.	Typ.	Max.	Unit.
$V_{(BR)CER}$	Collector - Emitter Breakdown Voltage (1)	$I_C = 100\text{mA}$, $R_{BE} = 10\Omega$	140			V
$V_{(BR)CEO}$	Collector - Emitter Breakdown Voltage (1)	$I_C = 100\text{mA}$, $I_B = 0$	90			V
$V_{(BR)CBO}$	Collector - Base Breakdown Voltage	$I_C = 0.1\text{mA}$, $I_E = 0$	140			V
$V_{(BR)EBO}$	Emitter - Base Breakdown Voltage	$I_E = 0.1\text{mA}$, $I_C = 0$	7			V
I_{CBO}	Collector Cut Off Current	$V_{CB} = 60\text{V}$, $I_C = 0$			0.01	μA
		$V_{CB} = 90\text{V}$, $I_E = 0$			0.01	
		$V_{CB} = 90\text{V}$, $I_E = 0$ $T_A = 150^\circ\text{C}$			10	
I_{EBO}	Emitter Cut Off Current	$V_{EB} = 5\text{V}$, $I_C = 0$			0.01	μA
h_{FE}	DC Current	$I_C = 1.0\text{mA}$, $V_{CE} = 10\text{V}$	35			—
		$I_C = 10\text{mA}$, $V_{CE} = 10\text{V}$ $T_A = -55^\circ\text{C}$	20			
		$I_C = 150\text{mA}$, $V_{CE} = 10\text{V}$	60		200	
$V_{CE(sat)}$	Collector - Emitter Saturation Voltage (1)	$I_C = 150\text{mA}$, $I_B = 15\text{mA}$			0.6	V
$V_{BE(sat)}$	Base - Emitter Saturation Voltage (1)	$I_C = 150\text{mA}$, $I_B = 15\text{mA}$			1.2	V
f_T	Current Gain - Bandwidth Product	$I_C = 50\text{mA}$, $V_{CE} = 10\text{V}$, $f = 100\text{ MHz}$	120			MHz
C_{obo}	Output Capacitance	$V_{CB} = 10\text{V}$, $I_E = 0$, $f = 1\text{ MHz}$			15	pF
C_{ibo}	Input Capacitance	$V_{EB} = 0.5\text{V}$, $I_C = 0$, $f = 1\text{ MHz}$			80	pF
h_{FE}	Small-Signal Current Gain	$I_C = 5\text{mA}$, $V_{CE} = 5\text{V}$, $f = 1\text{ KHz}$	50		275	—

1) Pulse test : Pulse Width < 300 μs ,Duty Cycle < 2%