

SILICON PLANAR EPITAXIAL PNP TRANSISTOR

2N2907AUA

- Low Power, High Speed Saturated Switching
- Hermetic Surface Mounted Package.
- Ideally suited for High Speed Switching and General Purpose Applications
- Screening Options Available



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

V_{CBO}	Collector – Base Voltage	-60V
V_{CEO}	Collector – Emitter Voltage	-60V
V_{EBO}	Emitter – Base Voltage	-5V
I_C	Continuous Collector Current	-600mA
P_D	Total Power Dissipation at $T_A = 25^\circ\text{C}$ Derate Above 37.5°C	500mW 3.08mW/ $^\circ\text{C}$
T_J	Junction Temperature Range	-65 to $+200^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65 to $+200^\circ\text{C}$

THERMAL PROPERTIES (Each Device)

Symbols	Parameters	Min.	Typ.	Max.	Units
$R_{\theta JA}$	Thermal Resistance, Junction To Ambient			325	$^\circ\text{C/W}$

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ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise stated)

Symbols	Parameters	Test Conditions	Min.	Typ	Max.	Units
V _{(BR)CEO} ⁽¹⁾	Collector-Emitter Breakdown Voltage	I _C = -10mA I _B = 0	-60			V
I _{CBO}	Collector Cut-Off Current	V _{CB} = -60V I _E = 0			-10	μA
		V _{CB} = -50V I _E = 0			-10	nA
		T _A = 150°C			-10	μA
I _{EBO}	Emitter Cut-Off Current	V _{EB} = -5V I _C = 0			-10	μA
		V _{EB} = -4V I _C = 0			-50	nA
I _{CES}	Collector Cut-Off Current	V _{CE} = -50V			-50	nA
V _{CE(sat)} ⁽¹⁾	Collector-Emitter Saturation Voltage	I _C = -150mA I _B = -15mA			-0.4	V
		I _C = -500mA I _B = -50mA			-1.6	
V _{BE(sat)} ⁽¹⁾	Base-Emitter Saturation Voltage	I _C = -150mA I _B = -15mA	-0.6		-1.3	
		I _C = -500mA I _B = -50mA			-2.6	
h _{FE} ⁽¹⁾	Forward-current transfer ratio	I _C = -0.1mA V _{CE} = -10V	75			
		I _C = -1.0mA V _{CE} = -10V	100		450	
		I _C = -10mA V _{CE} = -10V	100			
		T _A = -55°C	50			
		I _C = -150mA V _{CE} = -10V	100		300	
I _C = -500mA V _{CE} = -10V	50					

DYNAMIC CHARACTERISTICS

h _{fe}	Small signal forward-current transfer ratio	I _C = -20mA V _{CE} = -20V f = 100MHz	2			
h _{fe}	Small Signal Current Gain	I _C = -1.0mA V _{CE} = -10V f = 1.0KHz	100			
C _{obo}	Output Capacitance	V _{CB} = -10V I _E = 0 f = 1.0MHz			8	pF
C _{ibo}	Input Capacitance	V _{EB} = -2V I _C = 0 f = 1.0MHz			30	
t _{on}	Turn-On Time	I _C = -150mA V _{CC} = -30V I _{B1} = -15mA			45	ns
t _{off}	Turn-Off Time	I _C = -150mA V _{CC} = -30V I _{B1} = - I _{B2} = -15mA			300	

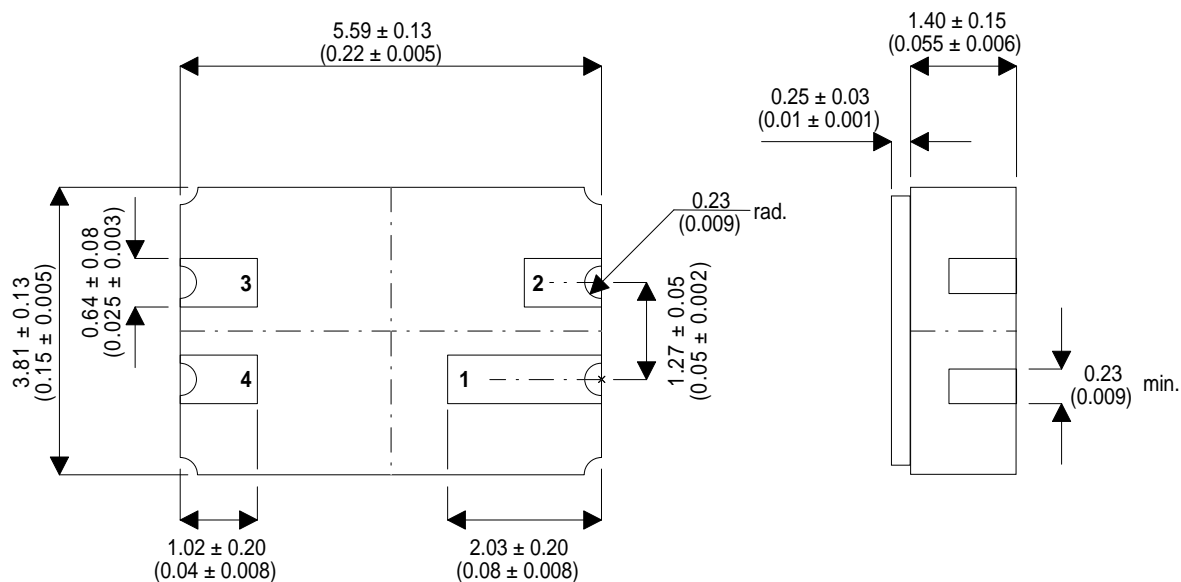
Notes

(1) Pulse Width ≤ 300us, δ ≤ 2%

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MECHANICAL DATA

Dimensions in mm (inches)



LCC3 (MO-041BA)

Underside View

Pad 1 - Collector Pad 2 - N/C Pad 3 - Base Pad 4 - Emitter

N/C = No Connection