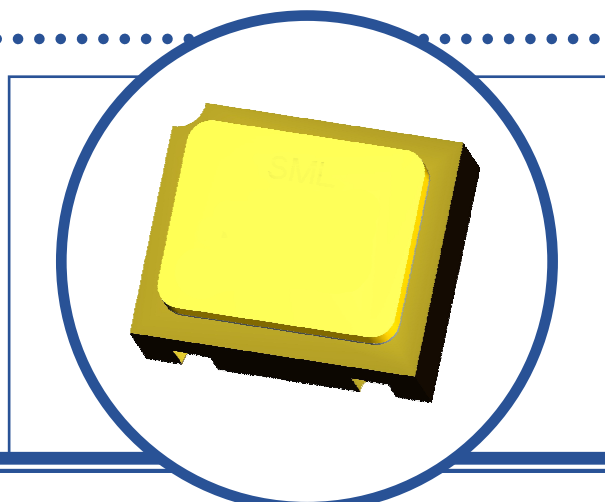


SILICON PLANAR EPITAXIAL NPN TRANSISTOR

2N2222AUB

- 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°C unless otherwise stated)

V _{CBO}	Collector – Base Voltage	75V
V _{CEO}	Collector – Emitter Voltage	50V
V _{EBO}	Emitter – Base Voltage	6V
I _C	Continuous Collector Current	800mA
P _D	Total Power Dissipation at T _A = 25°C Derate Above 37.5°C	500mW 3.08mW/°C
T _J	Junction Temperature Range	-65 to +200°C
T _{stg}	Storage Temperature Range	-65 to +200°C

THERMAL PROPERTIES (Each Device)

Symbols	Parameters	Min.	Typ.	Max.	Units
R _{θJA}	Thermal Resistance, Junction To Ambient			325	°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.



SILICON PLANAR EPITAXIAL NPN TRANSISTOR 2N2222AUB

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	50			V
I _{CBO}	Collector Cut-Off Current	V _{CB} = 75V I _E = 0			10	μA
		V _{CB} = 60V I _E = 0			10	nA
		T _A = 150°C			10	μA
I _{EBO}	Emitter Cut-Off Current	V _{EB} = 6V I _C = 0			10	μA
		V _{EB} = 4V I _C = 0			10	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			0.3	V
		I _C = 500mA I _B = 50mA			1.0	
V _{BE(sat)} ⁽¹⁾	Base-Emitter Saturation Voltage	I _C = 150mA I _B = 15mA	0.6		1.2	
		I _C = 500mA I _B = 50mA			2	
h _{FE} ⁽¹⁾	Forward-current transfer ratio	I _C = 0.1mA V _{CE} = 10V	50			
		I _C = 1.0mA V _{CE} = 10V	75		325	
		I _C = 10mA V _{CE} = 10V	100			
		T _A = -55°C	35			
		I _C = 150mA V _{CE} = 10V	100		300	
I _C = 500mA V _{CE} = 10V	30					

DYNAMIC CHARACTERISTICS

h _{fe}	Small signal forward-current transfer ratio	I _C = 20mA V _{CE} = 20V f = 100MHz	2.5			
h _{fe}	Small Signal Current Gain	I _C = 1.0mA V _{CE} = 10V f = 1.0KHz	50			
C _{obo}	Output Capacitance	V _{CB} = 10V I _E = 0 f = 1.0MHz			8	pF
C _{ibo}	Input Capacitance	V _{EB} = 0.5V I _C = 0 f = 1.0MHz			30	
t _{on}	Turn-On Time	I _C = 150mA V _{CC} = 30V I _{B1} = 15mA			35	ns
t _{off}	Turn-Off Time	I _C = 150mA V _{CC} = 30V I _{B1} = - I _{B2} = 15mA			300	

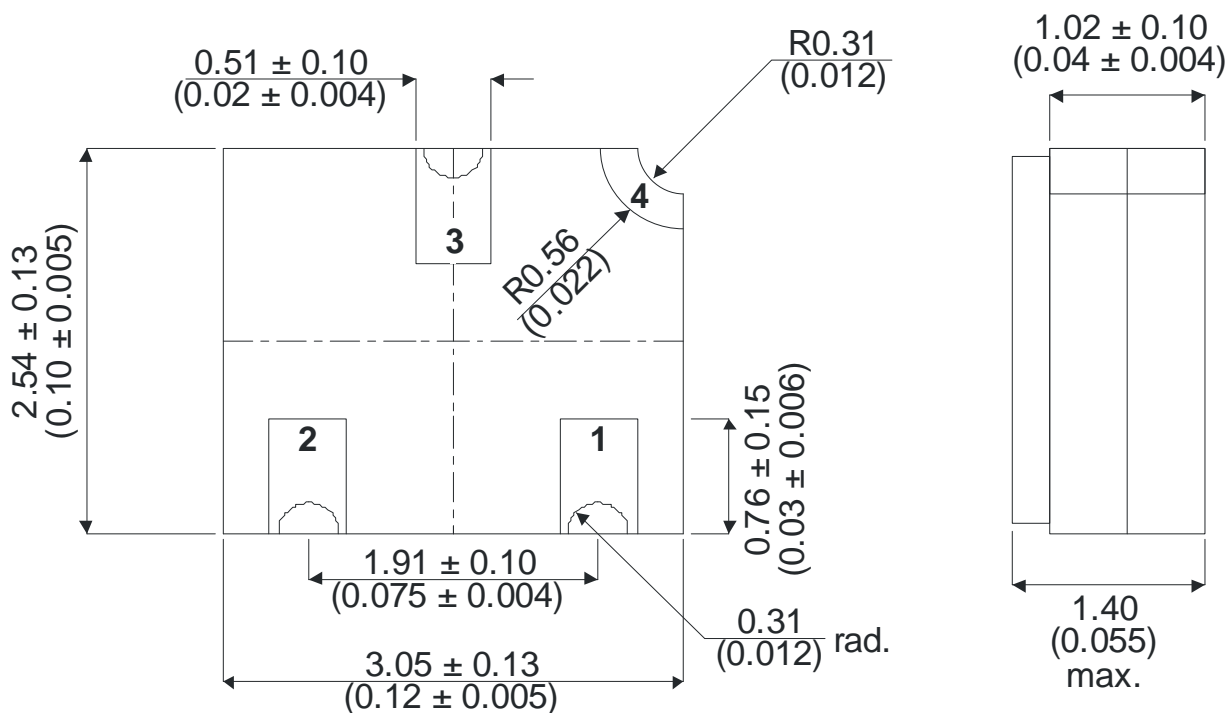
Notes

(1) Pulse Width ≤ 300μs, δ ≤ 2%

SILICON PLANAR EPITAXIAL NPN TRANSISTOR 2N2222AUB

MECHANICAL DATA

Dimensions in mm (inches)



LCC1-4 Underside View

Pad 1 - Base

Pad 2 - Emitter

Pad 3 - Collector

Pad 4 - Lid Contact *

* The additional contact provides a connection to the lid in the application. Connecting the metal lid to a known electrical potential stops deep dielectric discharge in space applications; see the Space Weather link www.semelab.co.uk/mil/lcc1_4 on the Semelab web site. Package variant to be specified at order.