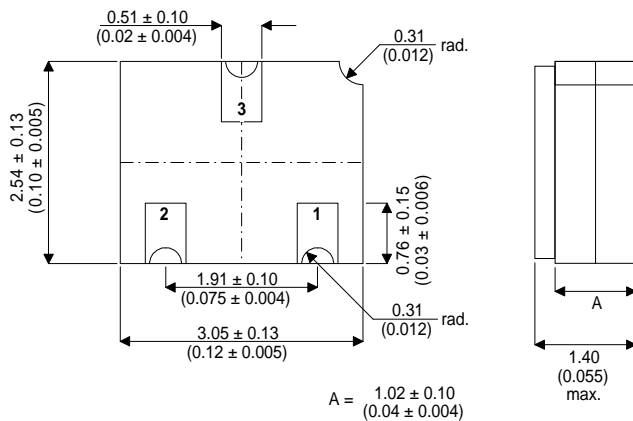


MECHANICAL DATA

Dimensions in mm (inches)



HIGH SPEED PNP SWITCHING TRANSISTOR FOR HIGH RELIABILITY APPLICATIONS

FEATURES

- SILICON PLANAR EPITAXIAL PNP TRANSISTOR
- HERMETIC CERAMIC SURFACE MOUNT PACKAGE (SOT23 COMPATIBLE)
- SCREENING OPTIONS AVAILABLE
- SPACE QUALITY LEVEL OPTIONS
- HIGH SPEED SATURATED SWITCHING

LCC1 (SOT23)

PAD 1 – Base PAD 2 – Emitter PAD 3 – Collector

APPLICATIONS

For high reliability general purpose applications requiring small size and low weight devices.

ABSOLUTE MAXIMUM RATINGS

$T_{CASE} = 25^{\circ}C$ unless otherwise stated

V_{CBO}	Collector - Base Voltage	-20V
V_{CEO}	Collector - Emitter Voltage ($I_B = 0$)	-20V
V_{EBO}	Emitter - Base Voltage ($I_C = 0$)	-4.0V
I_C	Continuous Collector Current	-200mA
P_D	Total Power Dissipation at $T_{case} \leq 25^{\circ}C$	300mW
	De-Rate above: $T_{case} \leq 50^{\circ}C$	2.20mW/ $^{\circ}C$
T_{stg}, T_J	Operating and Storage Temperature Range	-55 to +200 $^{\circ}C$

THERMAL DATA

$R_{\theta JA}$	Thermal Resistance Junction - Ambient	Max	420	$^{\circ}C/W$
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ELECTRICAL CHARACTERISTICS (T_{case}=25°C unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V _{(BR)CEO} *	Collector - Emitter Breakdown Voltage I _C = 10mA	-20	-	-	V
V _{(BR)CBO} *	Collector - Base Breakdown Voltage I _C = 10μA	-20	-	-	
V _{(BR)EBO} *	Emitter - Base Breakdown Voltage I _C = 0 I _E = 10μA	-4.0	-	-	
I _{CES} *	Collector Cut-Off Current V _{BE} = 0V V _{CE} = -10V	-	-	-80	nA
					T _C = 125°C
V _{CE(sat)} *	Collector - Emitter Saturation Voltage I _C = -10mA I _B = -1.0mA	-	-	-0.20	V
	I _C = -30mA I _B = -3mA	-	-	-0.25	
	I _C = -100mA I _B = -10mA	-	-	-0.75	
V _{BE(sat)} *	Base - Emitter Saturation Voltage I _C = -10mA I _B = -1.0mA	-0.78	-	-0.98	V
	I _C = -30mA I _B = -3mA	-0.85	-	-1.2	
	I _C = -100mA I _B = -10mA	-	-	-1.7	
h _{FE} *	DC Current Gain I _C = -10mA V _{CE} = -0.3V	25	-	-	
	I _C = -30mA V _{CE} = -0.5V	30	-	120	
	T _{AMB} = -55°C	12	-	-	
	I _C = -100mA V _{CE} = -1.0V	15	-	-	

DYNAMIC CHARACTERISTICS (T_{case}=25°C unless otherwise stated)

f _T	Transition Frequency I _C = -30mA V _{CE} = -10V f = 100MHz	400	-	-	MHz
C _{IBO}	Emitter - Base Capacitance I _C = 0 V _{EB} = -0.5V f = 1.0MHz	-	-	6.0	pF
C _{OBO}	Collector - Base Capacitance I _E = 0 V _{CB} = -5V f = 1.0MHz	-	-	5.0	pF
t _{on}	Turn-On Time V _{CC} = -2V I _C = -30mA	-	-	60	ns
t _{off}	Turn-Off Time I _{B1} = -1.5mA I _{B2} = -I _{B1}	-	-	90	

* Pulse test t_p = 300μs, δ < 2%

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