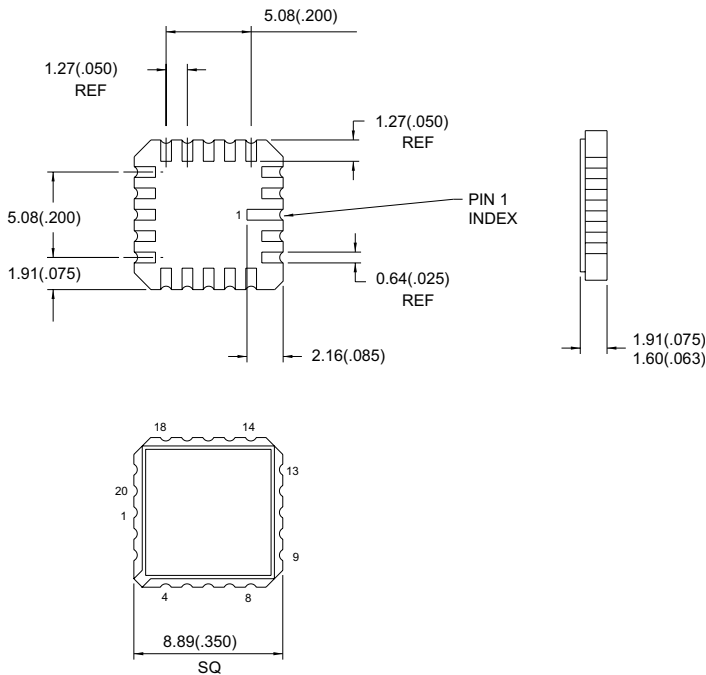


MECHANICAL DATA

Dimensions in mm (inches)



SURFACE MOUNT QUAD PNP TRANSISTOR

FEATURES

- FOUR INDEPENDENT TRANSISTORS IN A 0.35 INCH SQUARE CERAMIC PACKAGE
- SURFACE MOUNTABLE
- HERMETICALLY SEALED PACKAGE
- SCREENING OPTIONS AVAILABLE

DESCRIPTION

The 2N2907AQ-LCC20 is a 20 pad, hermetically sealed, Ceramic Surface Mount Transistor array, consisting of four 2N2907A silicon PNP transistor die.

PACKAGE LCC20

Pin 1 = n/c	Pin 6 = n/c	Pin 11 = n/c	Pin 16 = n/c
Pin 2 = Collector1	Pin 7 = Emitter 2	Pin12 =Collector 3	Pin 17 = Emitter 4
Pin 3 = n/c	Pin 8 = Base 2	Pin13 = n/c	Pin 18 = Base 4
Pin 4 = Base 1	Pin 9 = n/c	Pin 14 = Base 3	Pin 19 = n/c
Pin 5 = Emitter 1	Pin10 =Collector 2	Pin 15 = Emitter 3	Pin 20 =Collector 4

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	Collector Current	600mA
I_V	Isolation Voltage	500V _{DC}
P_D	Total Device Dissipation @ $T_A = 25^\circ\text{C}$ (four devices driven equally)	1W
P_D	Total Device Dissipation@ $T_S^{(1)} = 25^\circ\text{C}$ (four devices driven equally)	2W ⁽²⁾
T_J, T_{STG}	Operating and Storage Junction Temperature Range	-65 to +200°C
	Soldering Temperature (vapor phase reflow for 30 sec)	215°C
	Soldering Tempearaure (heated collect for 5 sec)	260°C

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

Parameter		Test Conditions		Min.	Typ.	Max.	Unit
OFF CHARACTERISTICS							
$V_{(BR)CEO}$	Collector – Emitter Sustaining Voltage	$I_C = 10\text{mA}$	$I_B = 0$	60			V
$V_{(BR)CBO}$	Collector – Base Breakdown Voltage	$I_C = 10\mu\text{A}$	$I_E = 0$	60			V
$V_{(BR)EBO}$	Emitter – Base Breakdown Voltage	$I_E = 10\mu\text{A}$	$I_C = 0$	5			V
I_{CBO}	Collector – Base Cut-off Current	$I_E = 0$	$V_{CB} = 50\text{V}$			10	nA
			$T_A = 150^\circ\text{C}$			10	μA
I_{EBO}	Emitter Base Cut-off Current	$I_C = 0$	$V_{EB} = 3.5\text{V}$			50	nA
ON CHARACTERISTICS							
$V_{CE(sat)}$	Collector – Emitter Saturation Voltage	$I_C = 150\text{mA}$	$I_B = 15\text{mA}^{(3)}$			0.4	V
		$I_C = 500\text{mA}$	$I_B = 50\text{mA}^{(3)}$			1.60	
$V_{BE(sat)}$	Base – Emitter Saturation Voltage	$I_C = 150\text{mA}$	$I_B = 15\text{mA}^{(3)}$			1.3	V
		$I_C = 500\text{mA}$	$I_C = 50\text{mA}^{(3)}$			2.6	
h_{FE}	Forwarded Current Transfer Ratio	$I_C = 0.1\text{mA}$	$V_{CE} = 10\text{V}$	75			—
		$I_C = 1\text{mA}$	$V_{CE} = 10\text{V}$	100	450		
		$I_C = 10\text{mA}$	$V_{CE} = 10\text{V}$	100			
		$I_C = 150\text{mA}^{(3)}$	$V_{CE} = 10\text{V}$	100	300		
		$I_C = 500\text{mA}^{(3)}$	$V_{CE} = 10\text{V}$	50			
		$I_C = 10\text{mA}$	$V_{CE} = 10\text{V}$	50			
	$T_A = -55^\circ\text{C}$						
SMALL SIGNAL CHARACTERISTICS							
h_{fe}	Forward Current Transfer Ratio	$I_C = 1\text{mA}$	$V_{CE} = 10\text{V}$	$f = 1\text{kHz}$	100		—
h_{fel}	Forward Curent Transfer Ratio	$I_C = 50\text{mA}$	$V_{CE} = 20\text{V}$	$f = 100\text{MHz}$	2		
C_{obo}	Open Circuit Output Capacitance	$V_{CB} = 10\text{V}$	$100\text{kHz} \leq f \leq 1\text{MHz}$			8	pF
C_{ibo}	Input Capacitance(output open)	$V_{EB} = 2\text{V}$	$100\text{kHz} \leq f \leq 1\text{MHz}$			30	
SWITCHING CHARACTERISTICS							
t_{on}	Turn-On Time	$V_{CC} = 30\text{V}$	$I_C 150\text{mA}$	$I_{B1} = 15\text{mA}$		45	ns
t_{off}	Turn-Off Time	$V_{CC} = 30\text{V}$	$I_C 150\text{mA}$	$I_{B1} = I_{B1}=15\text{mA}$		300	

NOTES:

- 1) T_s = Substrate Temperature that the chip carrier is mounted on.
- 2) Derate Linearly $11.4\text{mW}/^\circ\text{C}$ above 25°C . This rating is provided as an aid to designers. It is dependent upon mounting material and methods and is not measureable as an outgoing test.
- 3) Pulse Test Pulse Wide $\leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$