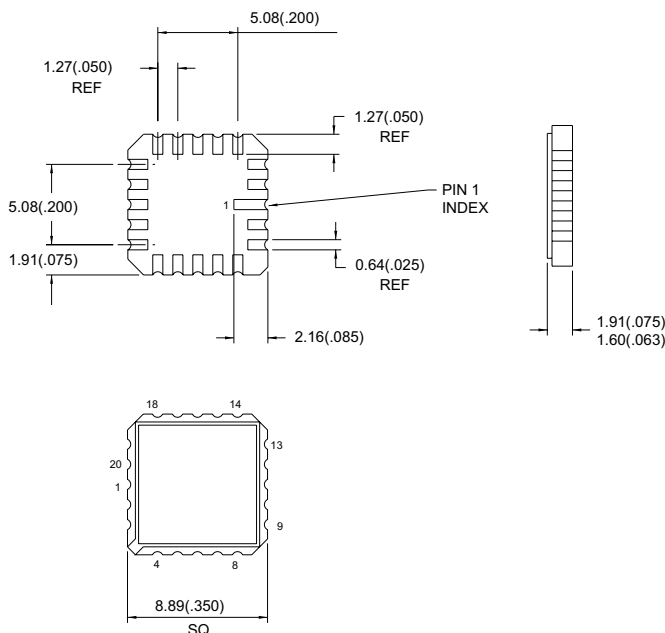


MECHANICAL DATA

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 Temperature (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	$I_E = 0$ $V_{CB} = 50\text{V}$ $T_A = 150^\circ\text{C}$		10	nA
				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		
		$I_C = 10\text{mA}$ $V_{CE} = 10\text{V}$ $T_A = -55^\circ\text{C}$	50		
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_{fe1}	Forward Current 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 measurable as an outgoing test.
- 3) Pulse Test Pulse Wide $\leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$