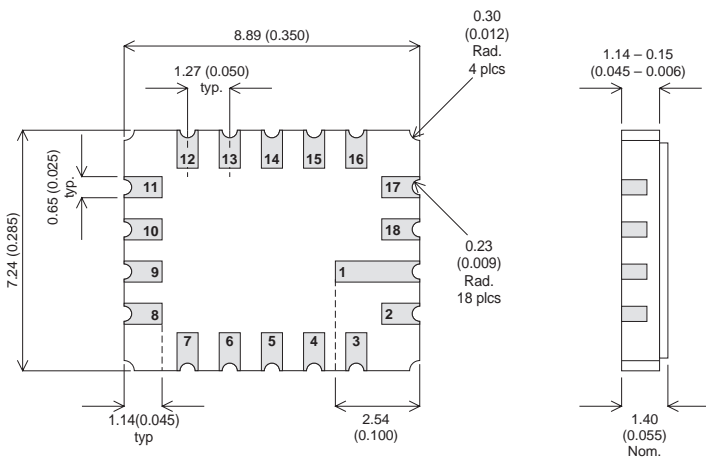


**QUAD HIGH SPEED, MEDIUM POWER  
PNP SWITCHING TRANSISTOR IN A  
HERMETICALLY SEALED  
CERAMIC SURFACE MOUNT PACKAGE  
FOR HIGH RELIABILITY APPLICATIONS**

**MECHANICAL DATA**  
Dimensions in mm (inches)



**LCC6 PACKAGE**  
**Underside View**

**FEATURES**

- QUAD SILICON PLANAR EPITAXIAL PNP TRANSISTORS
- HERMETIC CERAMIC SURFACE MOUNT PACKAGE
- CECC SCREENING OPTIONS
- SPACE QUALITY LEVELS OPTIONS
- HIGH SPEED SATURATED SWITCHING

- |                 |                 |                  |                  |
|-----------------|-----------------|------------------|------------------|
| 1 – Base 1      | 7.– Collector 2 | 10.– Base 3      | 16.– Collector 4 |
| 2 – Emitter 1   | 8.– Emitter 2   | 11 – Emitter 3   | 17.– Emitter 4   |
| 3 – Collector 1 | 9 – Base 2      | 12 – Collector 3 | 18.– Base 4      |
- 4,5,6,13,14,15 – n/c

**APPLICATIONS:**

Hermetically sealed quad surface mount version of the popular 2N2907A for high reliability / space applications requiring small size and low weight devices.

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

PER DIVCE		
$V_{CBO}$	Collector - Base Voltage	-60V
$V_{CEO}$	Collector - Emitter Voltage	-60V
$V_{EBO}$	Emitter - Base Voltage	-5V
$I_C$	Collector Current	600mA
$P_D$	Total Device Dissipation ( $T_A 25^\circ\text{C}$ )	500mW
$P_D$	Derate above $50^\circ\text{C}$	2.0mW / $^\circ\text{C}$
TOTAL DEVICE		
$P_D$	Total Device Dissipation ( $T_A 25^\circ\text{C}$ )	2.0W
$R_{\theta JA}$	Thermal Resistance Junction to Ambient	$60^\circ\text{C} / \text{W}$
$R_{\theta JC}$	Thermal Resistance Junction to Case	$30^\circ\text{C} / \text{W}$
$T_{STG}$	Storage Temperature	-55 to $200^\circ\text{C}$

**ELECTRICAL CHARACTERISTICS PER DEVICE** ( $T_C = 25^\circ\text{C}$  unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$V_{CEO(sus)}$ * Collector – Emitter Sustaining Voltage	$I_C = 10\text{mA}$	-60			V
$V_{(BR)CBO}$ * Collector – Base Breakdown Voltage	$I_C = 10\mu\text{A}$	-60			V
$V_{(BR)EBO}$ * Emitter – Base Breakdown Voltage	$I_E = 10\mu\text{A}$ $I_C = 0$	-5			V
$I_{CEX}$ * Collector Cut-off Current	$V_{CE} = 30\text{V}$ $V_{BE} = 0.5\text{V}$			50	nA
$I_{CBO}$ * Collector – Base Cut-off Current	$I_E = 0$ $V_{CB} = 50\text{V}$ $T_C = 125^\circ\text{C}$			0.01 10	$\mu\text{A}$
$I_{BEO}$ Base Cut-off Current	$V_{CE} = 30\text{V}$ $V_{BE} = 0.5\text{V}$			50	nA
$V_{CE(sat)}$ * Collector – Emitter Saturation Voltage	$I_C = 150\text{mA}$ $I_B = 15\text{mA}$ $I_C = 500\text{mA}$ $I_B = 50\text{mA}$			-0.4 -1.6	V
$V_{BE(sat)}$ * Base – Emitter Saturation Voltage	$I_C = 150\text{mA}$ $I_B = 15\text{mA}$ $I_C = 500\text{mA}$ $I_B = 50\text{mA}$			-1.3 -2.6	V
$h_{FE}$ * DC Current Gain	$I_C = 0.1\text{mA}$ $V_{CE} = 10\text{V}$	75			—
	$I_C = 1\text{mA}$ $V_{CE} = 10\text{V}$	100			
	$I_C = 10\text{mA}$ $V_{CE} = 10\text{V}$	100			
	$I_C = 150\text{mA}$ $V_{CE} = 10\text{V}$	100		300	
	$I_C = 500\text{mA}$ $V_{CE} = 10\text{V}$	50			

\* Pulse test  $t_p = 300\mu\text{s}$ ,  $\delta \leq 2\%$

**DYNAMIC CHARACTERISTICS PER DEVICE** ( $T_C = 25^\circ\text{C}$  unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$f_T$ Transition Frequency	$I_C = 50\text{mA}$ $V_{CE} = 20\text{V}$ $f = 100\text{MHz}$	200			MHz
$C_{ob}$ Output Capacitance	$V_{CB} = 10\text{V}$ $I_E = 0$ $f = 1.0\text{MHz}$			8	pF
$C_{ib}$ Input Capacitance	$V_{BE} = 2\text{V}$ $I_C = 0$ $f = 1.0\text{MHz}$			30	pF

**SWITCHING CHARACTERISTICS PER DEVICE (RESISTIVE LOAD)**

( $T_C = 25^\circ\text{C}$  unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$t_{on}$ Turn-on Time	$V_{CC} = 30\text{V}$ $I_C = 150\text{mA}$ $I_{B1} = 15\text{mA}$		26	45	ns
$t_d$ Delay Time			6.0	10	
$t_r$ Rise Time			20	40	
$t_{off}$ Turn-off Time	$V_{CC} = 6\text{V}$ $I_C = 150\text{mA}$ $I_{B1} = I_{B2} = 15\text{mA}$		70	100	ns
$t_s$ Storage Time			50	80	
$t_f$ Fall Time			20	30	