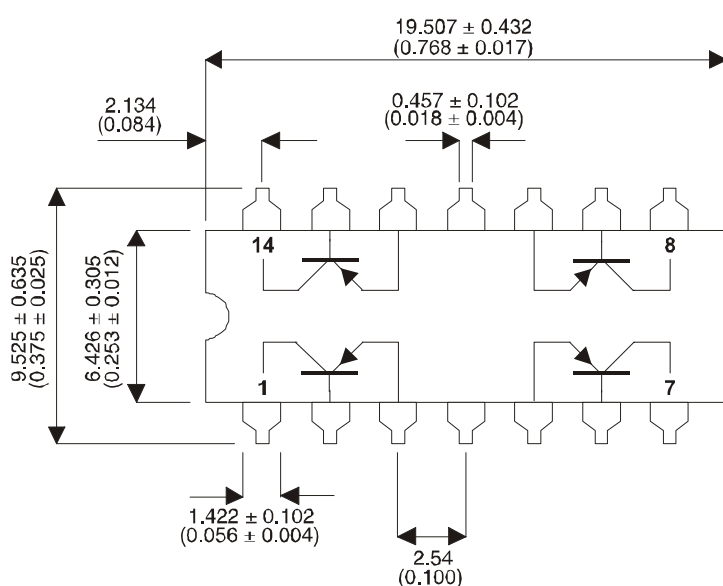


4 HIGH SPEED, MEDIUM POWER, PNP SWITCHING TRANSISTORS IN A HERMETICALLY SEALED 14 LEADED CERDIP (J-PACK) PACKAGE

MECHANICAL DATA

Dimensions in mm (inches)


CERDIP-14 J-Pack
FEATURES

- SILICON PLANAR EPITAXIAL PNP TRANSISTOR
- HERMETIC PACKAGE
- CECC SCREENING OPTIONS
- JAN LEVEL SCREENING OPTIONS
- HIGH SPEED SATURATED SWITCHING

APPLICATIONS:

Hermetically sealed CERDIP Quad version of the popular 2N2907. Suitable for High Reliability applications

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

V_{CEO}	Collector – Emitter Voltage	40V
V_{CBO}	Collector – Base Voltage	60V
V_{EBO}	Emitter – Base Voltage	5V
I_C	Collector Current - Continuous	600mA
P_D	Total Power Dissipation	1.9W (0.65W per Transistor)
	Derate above 25°C	10.88mW/ $^{\circ}\text{C}$ (3.72mW/ $^{\circ}\text{C}$ per Transistor)
T_J	Operating Junction Temperature	-65 $^{\circ}\text{C}$ to +200 $^{\circ}\text{C}$
T_{stg}	Storage Temperature	-65 $^{\circ}\text{C}$ to +200 $^{\circ}\text{C}$

Semelab Plc 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.

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$V_{(BR)CEO}^1$ Collector – Emitter Breakdown Voltage	$I_C = 10\text{mA}$ $I_B = 0$	40			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 Cut-off current	$V_{CB} = 30\text{V}$ $I_E = 0$			50	nA
I_{EBO} Emitter Cut-off current	$V_{CB} = 3.0\text{V}$ $I_E = 0$			50	nA
h_{FE}^1 DC Current Gain	$V_{CE} = 10\text{V}$ $I_C = 10\text{mA}$ $I_C = 150\text{mA}$ $I_C = 300\text{mA}$	75			
		100			
		50			
$V_{CE(sat)}^1$ Collector - Emitter Saturation Voltage	$I_C = 150\text{mA}$ $I_B = 15\text{mA}$			0.4	V
	$I_C = 300\text{mA}$ $I_B = 30\text{mA}$			1.6	
$V_{BE(sat)}^1$ Base - Emitter Saturation Voltage	$I_C = 150\text{mA}$ $I_B = 15\text{mA}$			1.3	V
	$I_C = 300\text{mA}$ $I_B = 30\text{mA}$			2.6	

1) Pulse Test: Pulse Width $\leq 300\mu\text{s}$, Duty Cycle = 2.0%

DYNAMIC CHARACTERISTICS ($T_{case} = 25^{\circ}\text{C}$ unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
f_T Current Gain – Bandwidth Product (f=100MHz)	$I_C = 50\text{mA}$ $V_{CB} = 20\text{V}$	200	350		MHz
C_{obo} Output Capacitance (f=1MHz)	$V_{CB} = 10\text{V}$ $I_E = 0$		6.0	8.0	pF
C_{ibo} Input Capacitance (f=1MHz)	$V_{BE} = 2\text{V}$ $I_C = 0$		20	30	pF
t_{on} Turn-On Time ($I_{B1} = 15\text{mA}$)	$V_{CC} = 30\text{V}$ $I_C = 150\text{mA}$		30		ns
t_{off} Turn-Off Time ($I_{B1} - I_{B2} = 15\text{mA}$)	$V_{CC} = 6\text{V}$ $I_C = 150\text{mA}$		100		ns