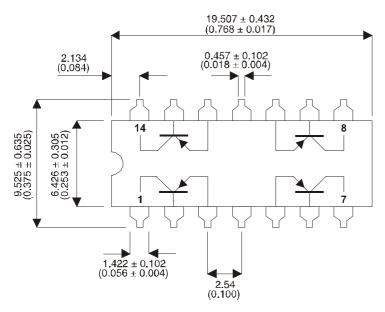




## 4 HIGH SPEED, MEDIUM POWER, PNP SWITCHING TRANSISTORS IN A HERMETICALLY SEALED 14 LEADED CERDIP (J-PACK) PACKAGE

# 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<sub>amb</sub> = 25°C unless otherwise stated)

$V_{CEO}$	Collector – Emitter Voltage		40V
$V_{CBO}$	Collector – Base Voltage		60V
$V_{EBO}$	Emitter – Base Voltage		5V
I <sub>C</sub>	Collector Current - Continuous		600mA
$P_{D}$	Total Power Dissipation		1.9W
. Д			(0.65W per Transistor)
		Derate above 25°C	10.88mW/°C
			(3.72mW/°C per Transistor)
$T_J$	Operating Junction Temperature		-65°C to +200°C
T <sub>stg</sub>	Storage Temperature		-65°C to +200°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<sub>amb</sub> = 25°C unless otherwise stated)

Parameter		Test Conditions		Min.	Тур.	Max.	Unit
V <sub>(BR)CEO</sub> <sup>1</sup>	Collector – Emitter Breakdown Voltage	$I_C = 10mA$	$I_B = 0$	40			٧
V <sub>(BR)CBO</sub>	Collector –Base Breakdown Voltage	$I_C = 10\mu A$	$I_E = 0$	60			V
V <sub>(BR)EBO</sub>	Emitter –Base Breakdown Voltage	I <sub>E</sub> = 10μA	I <sub>C</sub> = 0	5			V
I <sub>CBO</sub>	Collector Cut-off current	$V_{CB} = 30V$	I <sub>E</sub> = 0			50	nA
I <sub>EBO</sub>	Emitter Cut-off current	$V_{CB} = 3.0V$	$I_E = 0$			50	nA
			$I_C = 10mA$	75			
h <sub>FE</sub> 1	DC Current Gain	V <sub>CE</sub> = 10V	$I_C = 150 \text{mA}$	100			
			$I_C = 300 \text{mA}$	50			
V <sub>CE(sat)</sub> ¹	Collector - Emitter Saturation Voltage	I <sub>C</sub> = 150mA	I <sub>B</sub> = 15mA			0.4	- V
		I <sub>C</sub> = 300mA	$I_B = 30 \text{mA}$			1.6	
V <sub>BE(sat)</sub> <sup>1</sup>	Base - Emitter Saturation Voltage	I <sub>C</sub> = 150mA	$I_B = 15mA$			1.3	- V
		$I_C = 300 \text{mA}$	$I_B = 30 \text{mA}$			2.6	

Pulse Test: Pulse Width ≤ 300µs, Duty Cycle = 2.0%

## **DYNAMIC CHARACTERISTICS** (T<sub>case</sub> = 25°C unless otherwise stated)

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

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**Semelab plc.** Telephone +44(0)1455 556565. Fax +44(0)1455 552612. E-mail: sales@semelab.co.uk Website: http://www.semelab.co.uk