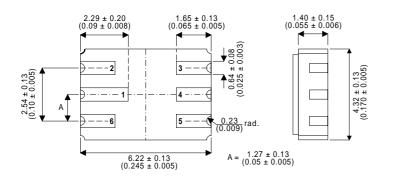
### 2N2894DCSM



## **DUAL HIGH SPEED, MEDIUM POWER, PNP GENERAL PURPOSE TRANSISTOR IN A** HERMETICALLY SEALED **CERAMIC SURFACE MOUNT PACKAGE**

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



#### LCC2 PACKAGE **Underside View**

PAD 1 – Collector 1	
PAD 2 – Base 1	
PAD 3 – Base 2	

PAD 4 – Collector 2 PAD 5 – Emitter 2 PAD 6 – Emitter 1

# FEATURES

- SILICON PLANAR EPITAXIAL DUAL PNP TRANSISTOR
- HERMETIC CERAMIC SURFACE MOUNT PACKAGE
- SCREENING OPTIONS AVAILABLE
- HIGH SPEED, LOW SATURATION SWITCH

#### **APPLICATIONS:**

Hermetically sealed dual surface mount version of the popular 2N2894 for high reliability applications requiring small size and low weight devices.

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

		- \ A	
V <sub>CBO</sub>	Collector – Base Voltage	-12V	
V <sub>CEO</sub>	Collector – Emitter Voltag	-12V	
V <sub>EBO</sub>	Emitter – Base Voltage		-4V
I <sub>C</sub>	Collector Current		200mA
P <sub>D</sub>	Total Device Dissipation	@ T <sub>A</sub> =25°C	360mW
		Derate above 25°C	2.06mW / °C
P <sub>D</sub>	Total Device Dissipation	@ T <sub>C</sub> =25°C	1.2W
		Derate above 25°C	6.85mW / °C
$T_{STG}$ , $T_{J}$	Operating and Storage Temperature Range		–65 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.

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# 2N2894DCSM



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

	Parameter	Test Con	ditions	Min.	Тур.	Max.	Unit
V <sub>(BR)CBO*</sub>	Collector – Base Breakdown Voltage	I <sub>C</sub> = 10μΑ	$I_E = 0$	- 12			
V <sub>(BR)CEO</sub>	Collector – Emitter Breakdown Voltage	I <sub>C</sub> = 10mA	I <sub>B</sub> = 0	- 12			V
V <sub>(BR)EBO</sub>	Emitter – Base Breakdown Voltage	I <sub>E</sub> = 10μΑ	$I_{\rm C} = 0$	- 4			
I <sub>CBO</sub>	Collector Cut-off Current	$V_{CB} = -6V$	$T_{amb} = 125^{\circ}C$			- 10	μA
I <sub>CES</sub>	Collector Cut-off Current	$V_{BE} = 0$	$V_{CE} = -6V$			- 80	nA
	Collector – Emitter Saturation Voltage	I <sub>C</sub> = -10mA	I <sub>B</sub> = -1mA			-0.15	V
V <sub>CE(sat)</sub>		I <sub>C</sub> = -30mA	I <sub>B</sub> = -3mA			-0.20	
		$I_{\rm C} = -100 {\rm mA}$	I <sub>B</sub> = -10mA			- 0.50	
	Base – Emitter On Voltage	$I_{\rm C} = -10 {\rm mA}$	$I_B = -1mA$	-0.78		-0.98	
V <sub>BE(sat)</sub>		I <sub>C</sub> = -30mA	I <sub>B</sub> = -3mA	-0.85		-1.2	V
		$I_{\rm C} = -100 {\rm mA}$	I <sub>B</sub> = -10mA			-1.7	
	DC Current Gain	$I_{\rm C} = -10 {\rm mA}$	$V_{CE} = -0.3V$	30			
		I <sub>C</sub> = -30mA	$V_{CE} = -0.5V$	40		150	
h <sub>FE</sub>		$I_{\rm C} = -100 {\rm mA}$	$V_{CE} = -1V$	25			
		I <sub>C</sub> = -30mA	$V_{CE} = -0.5V$	17			
			T <sub>amb</sub> = 125°C	17			
f	Current Gain Bandwidth Product	$V_{CE} = -10V$	f = 100MHz	400			MHz
f <sub>T</sub>		I <sub>C</sub> = -30mA		400			
<u> </u>	Emitter – Base – Capacitance	$V_{EB} = -5V$	$I_{\rm C} = 0$			6	pF
C <sub>ebo</sub>		f = 1MHz					
<u> </u>	Collector – Base – Capacitance	$V_{CB} = -5V$	$I_{\rm C} = 0$			6	pF
C <sub>cbo</sub>		f = 1MHz					рг
	Turn on Time	I <sub>C</sub> = –30mA	$V_{CE} = -2V$			60	ns
t <sub>on</sub>		I <sub>B2</sub> = -1.5mA					
t <sub>off</sub>		I <sub>C</sub> = –30mA	$V_{CE} = -2V$			0	
	Turn off Time	$I_{B1} = I_{B2} = -1.5$	ōmA			9	ns

\* Pulse Test:  $t_p \leq 300 \mu s, \ \delta \leq 2\%$ .

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