#### CMPT5088 CMPT5089

# SURFACE MOUNT NPN SILICON TRANSISTOR



www.centralsemi.com

#### **DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMPT5088 and CMPT5089 are NPN silicon transistors manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for small signal general purpose and switching applications.

MARKING CODES: CMPT5088: C1Q

CMPT5089: C1R



MAXIMUM RATINGS: (T <sub>A</sub> =25°C)	SYMBOL	<b>CMPT5088</b>	CMPT5089	UNITS
Collector-Base Voltage	$V_{CBO}$	35	30	V
Collector-Emitter Voltage	$V_{CEO}$	30	25	V
Emitter-Base Voltage	$V_{EBO}$	4.	V	
Continuous Collector Current	$I_{C}$	5	mA	
Power Dissipation	$P_{D}$	35	mW	
Operating and Storage Junction Temperature	T <sub>J</sub> , T <sub>stg</sub>	-65 to	+150	°C
Thermal Resistance	$\Theta_{JA}$	35	57	°C/W

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

		CMP <sup>-</sup>	CMPT5088		T5089	
SYMBOL	TEST CONDITIONS	MIN	MAX	MIN	MAX	UNITS
I <sub>CBO</sub>	V <sub>CB</sub> =20V	-	50	-	-	nA
I <sub>CBO</sub>	V <sub>CB</sub> =15V	-	-	-	50	nA
I <sub>EBO</sub>	V <sub>EB</sub> =3.0V	-	50	-	-	nA
I <sub>EBO</sub>	V <sub>EB</sub> =4.5V	-	-	-	100	nA
BV <sub>CBO</sub>	I <sub>C</sub> =100μA	35	-	30	-	V
BV <sub>CEO</sub>	I <sub>C</sub> =1.0mA	30	-	25	-	V
BV <sub>EBO</sub>	I <sub>E</sub> =100μA	4.5	-	4.5	-	V
V <sub>CE(SAT)</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =1.0mA	-	0.5	-	0.5	V
V <sub>BE(SAT)</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =1.0mA	-	8.0	-	8.0	V
h <sub>FE</sub>	$V_{CE}$ =5.0V, $I_{C}$ =0.1mA	300	900	400	1200	
h <sub>FE</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =1.0mA	350	-	450	-	
h <sub>FE</sub>	$V_{CE}$ =5.0V, $I_{C}$ =10mA	300	-	400	-	
f <sub>T</sub>	$V_{CE}$ =5.0V, $I_{C}$ =500 $\mu$ A, f=20MHz	50	-	50	-	MHz
C <sub>ob</sub>	$V_{CB}$ =5.0V, $I_{E}$ =0, f=1.0MHz	-	4.0	-	4.0	pF
C <sub>ib</sub>	$V_{BE}$ =0.5V, $I_{C}$ =0, f=1.0MHz	-	15	-	15	pF
h <sub>fe</sub>	$V_{CE}$ =5.0V, $I_{C}$ =1.0mA, f=1.0kHz	350	1400	450	1800	
NF	$V_{CE}$ =5.0V, $I_{C}$ =100 $\mu$ A, $R_{S}$ =10 $k\Omega$ ,					
	f=10Hz to 15.7kHz	-	3.0	-	2.0	dB

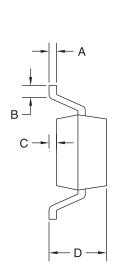
R7 (9-September 2010)

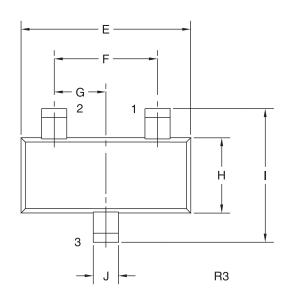
#### CMPT5088 CMPT5089

# SURFACE MOUNT NPN SILICON TRANSISTOR



### **SOT-23 CASE - MECHANICAL OUTLINE**





#### LEAD CODE:

- 1) Base
- 2) Emitter
- 3) Collector

MARKING CODES: CMPT5088: C1Q CMPT5089: C1R

DIMENSIONS							
	INCHES		MILLIMETERS				
SYMBOL	MIN	MAX	MIN	MAX			
Α	0.003	0.007	0.08	0.18			
В	0.006	-	0.15	-			
С	-	0.005	-	0.13			
D	0.035	0.043	0.89	1.09			
E	0.110	0.120	2.80	3.05			
F	0.075		1.90				
G	0.037		0.95				
Н	0.047	0.055	1.19	1.40			
	0.083	0.098	2.10	2.49			
J	0.014	0.020	0.35	0.50			

SOT-23 (REV: R3)

## **X-ON Electronics**

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Bipolar Transistors - BJT category:

Click to view products by Central Semiconductor manufacturer:

Other Similar products are found below:

619691C MCH4017-TL-H BC546/116 BC557/116 BSW67A NTE158 NTE187A NTE195A NTE2302 NTE2330 NTE63 C4460
2SA1419T-TD-H 2SA1721-O(TE85L,F) 2SA2126-E 2SB1204S-TL-E 2SC5488A-TL-H 2SD2150T100R SP000011176 FMMTA92QTA
2N2369ADCSM 2N5769 2SC2412KT146S 2SC5490A-TL-H 2SD1816S-TL-E 2SD1816T-TL-E CMXT2207 TR CPH6501-TL-E
MCH4021-TL-E US6T6TR NJL0281DG 732314D CMXT3906 TR CPH3121-TL-E CPH6021-TL-H 873787E IMZ2AT108 UMX21NTR
MCH6102-TL-E NJL0302DG 2N3583 2SA1434-TB-E 2SC3143-4-TB-E 2SD1621S-TD-E NTE103 30A02MH-TL-E NSV40301MZ4T1G
NTE101 NTE13 NTE15