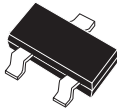


**CMPT5088  
CMPT5089**

**NPN SILICON TRANSISTORS**



**SOT-23 CASE**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMPT5088, CMPT5089 types are NPN silicon transistors manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for applications requiring high gain and low noise.

**Marking Codes are C1Q, C1R Respectively.**

**MAXIMUM RATINGS** ( $T_A=25^{\circ}\text{C}$ )

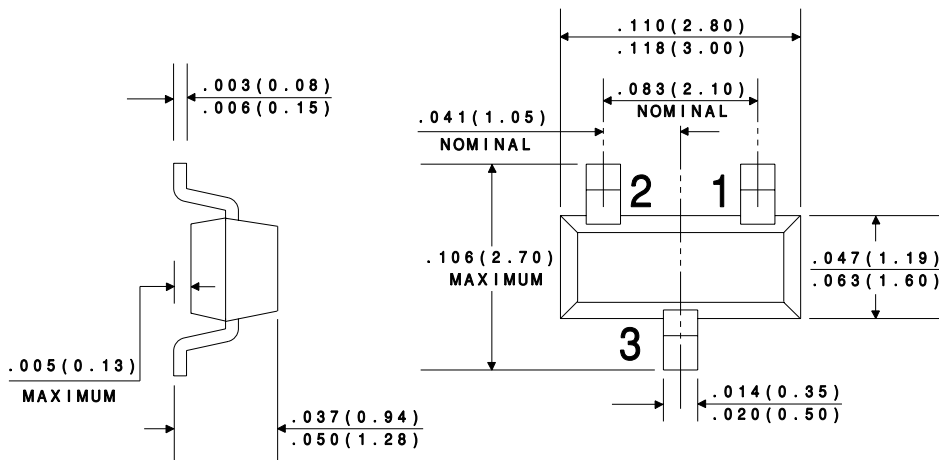
	<b>SYMBOL</b>	<b>CMPT5088</b>	<b>CMPT5089</b>	<b>UNITS</b>
Collector-Base Voltage	$V_{CB0}$	35	30	V
Collector-Emitter Voltage	$V_{CEO}$	30	25	V
Emitter-Base Voltage	$V_{EBO}$		4.5	V
Collector Current	$I_C$		50	mA
Power Dissipation	$P_D$		350	mW
Operating and Storage				
Junction Temperature	$T_J, T_{stg}$		-65 to +150	$^{\circ}\text{C}$
Thermal Resistance	$\Theta_{JA}$		357	$^{\circ}\text{C}/\text{W}$

**ELECTRICAL CHARACTERISTICS** ( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

<b>SYMBOL</b>	<b>TEST CONDITIONS</b>	<b>CMPT5088</b>		<b>CMPT5089</b>		<b>UNITS</b>
		<b>MIN</b>	<b>MAX</b>	<b>MIN</b>	<b>MAX</b>	
$I_{CBO}$	$V_{CB}=20\text{V}$		50		-	nA
$I_{CBO}$	$V_{CB}=15\text{V}$		-		50	nA
$I_{EBO}$	$V_{EB}=3.0\text{V}$		50		-	nA
$I_{EBO}$	$V_{EB}=4.5\text{V}$		-		100	nA
$BV_{CBO}$	$I_C=100\mu\text{A}$	35		30		V
$BV_{CEO}$	$I_C=1.0\text{mA}$	30		25		V
$BV_{EBO}$	$I_E=100\mu\text{A}$	4.5		4.5		V
$V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		0.5		0.5	V
$V_{BE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		0.8		0.8	V
$h_{FE}$	$V_{CE}=5.0\text{V}, I_C=0.1\text{mA}$	300	900	400	1200	
$h_{FE}$	$V_{CE}=5.0\text{V}, I_C=1.0\text{mA}$	350		450		
$h_{FE}$	$V_{CE}=5.0\text{V}, I_C=10\text{mA}$	300		400		
$f_T$	$V_{CE}=5.0\text{V}, I_C=500\mu\text{A}, f=20\text{MHz}$	50		50		MHz
$C_{ob}$	$V_{CB}=5.0\text{V}, I_E=0, f=1.0\text{MHz}$		4.0		4.0	pF

SYMBOL	TEST CONDITIONS	CMPT5088		CMPT5089		UNITS
		MIN	MAX	MIN	MAX	
$C_{ib}$	$V_{BE}=0.5V, I_C=0, f=1.0MHz$		10		10	pF
$h_{fe}$	$V_{CE}=5.0V, I_C=1.0mA, f=1.0kHz$	350	1400	450	1800	
NF	$V_{CE}=5.0V, I_C=100\mu A, R_S=10k\Omega$ $f=10Hz$ to $15.7kHz$		3.0		2.0	dB

All dimensions in inches (mm).



LEAD CODE:

- 1) BASE
- 2) EMITTER
- 3) COLLECTOR