

CMPT5179

**SURFACE MOUNT
NPN SILICON RF TRANSISTOR**



SOT-23 CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMPT5179 type is an NPN silicon RF transistor manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for low noise, high frequency amplifier and high output oscillator applications.

MARKING CODE: C7H

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

Collector-Base Voltage
Collector-Emitter Voltage
Emitter-Base Voltage
Continuous Collector Current
Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance

SYMBOL

V_{CBO} 20
 V_{CEO} 15
 V_{EBO} 2.5
 I_C 50
 P_D 350
 T_J, T_{stg} -65 to +150
 θ_{JA} 357

UNITS

V
V
V
mA
mW
 $^{\circ}\text{C}$
 $^{\circ}\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{CBO}	$V_{CB}=15\text{V}$			20	nA
BV_{CBO}	$I_C=10\mu\text{A}$	20			V
BV_{CEO}	$I_C=3.0\text{mA}$	15			V
BV_{EBO}	$I_E=10\mu\text{A}$	2.5			V
$V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$			0.4	V
$V_{BE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$			1.0	V
h_{FE}	$V_{CE}=1.0\text{V}, I_C=3.0\text{mA}$	25			
f_T	$V_{CE}=6.0\text{V}, I_C=5.0\text{mA}, f=100\text{MHz}$	900	1450		MHz
C_{cb}	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$			1.0	pF
h_{fe}	$V_{CE}=6.0\text{V}, I_C=2.0\text{mA}, f=1.0\text{kHz}$	25			
G_{pe}	$V_{CE}=6.0\text{V}, I_C=5.0\text{mA}, f=200\text{MHz}$		15		dB
NF	$V_{CE}=6.0\text{V}, I_C=1.5\text{mA}, R_S=50\Omega, f=200\text{MHz}$		4.5		dB

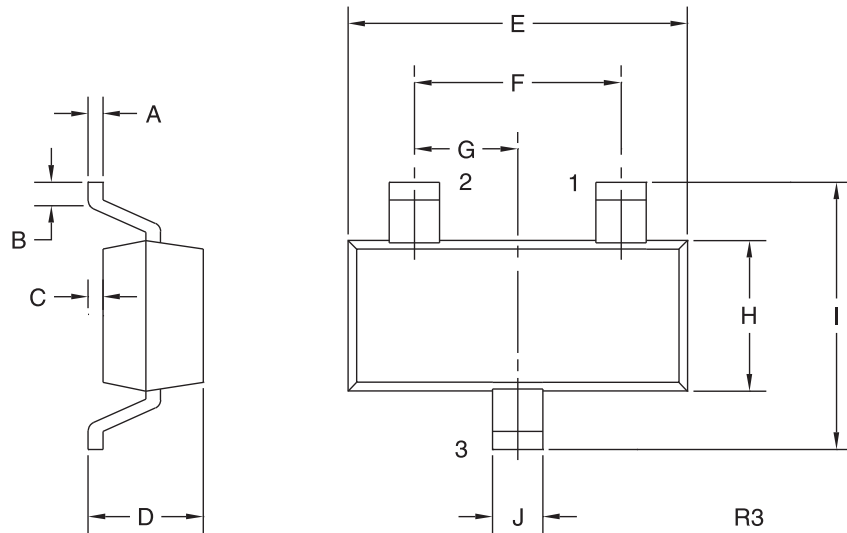
R6 (1-February 2010)

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SOT-23 CASE - MECHANICAL OUTLINE



LEAD CODE:

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

MARKING CODE: C7H

DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.003	0.007	0.08	0.18
B	0.006	-	0.15	-
C	-	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	
H	0.047	0.055	1.19	1.40
I	0.083	0.098	2.10	2.49
J	0.014	0.020	0.35	0.50

SOT-23 (REV: R3)

R6 (1-February 2010)