

CMPT918

**SURFACE MOUNT  
NPN SILICON  
RF TRANSISTOR**



[www.centrasemi.com](http://www.centrasemi.com)

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMPT918 type is an NPN silicon RF transistor manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for high frequency (VHF/UHF) amplifier and oscillator applications.

**MARKING CODE: C3B**



**SOT-23 CASE**

**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**

$V_{CB0}$	30
$V_{CEO}$	15
$V_{EBO}$	3.0
$I_C$	50
$P_D$	350
$T_J, T_{stg}$	-65 to +150
$\theta_{JA}$	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)

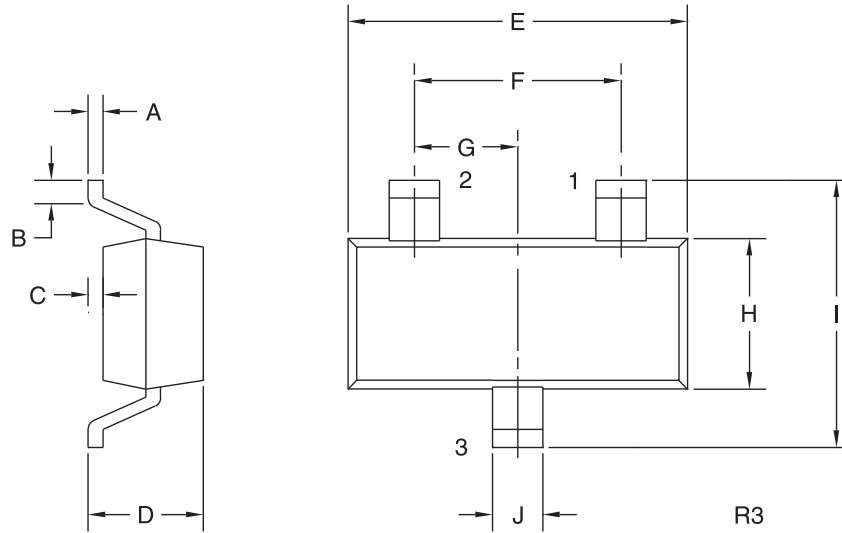
SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$I_{CBO}$	$V_{CB}=15\text{V}$		10	nA
$BV_{CBO}$	$I_C=1.0\mu\text{A}$	30		V
$BV_{CEO}$	$I_C=3.0\text{mA}$	15		V
$BV_{EBO}$	$I_E=10\mu\text{A}$	3.0		V
$V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		0.4	V
$V_{BE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		1.0	V
$h_{FE}$	$V_{CE}=1.0\text{V}, I_C=3.0\text{mA}$	20		
$f_T$	$V_{CE}=10\text{V}, I_C=4.0\text{mA}, f=100\text{MHz}$	600		MHz
$C_{ob}$	$V_{CB}=0\text{V}, I_E=0, f=1.0\text{MHz}$		3.0	pF
$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$		1.7	pF
$C_{ib}$	$V_{EB}=0.5\text{V}, I_C=0, f=1.0\text{MHz}$		2.0	pF
$P_{out}$	$V_{CB}=15\text{V}, I_C=8.0\text{mA}, f=500\text{MHz}$	30		mW
$G_{pe}$	$V_{CB}=12\text{V}, I_C=6.0\text{mA}, f=200\text{MHz}$	11		dB
$N_F$	$V_{CE}=6.0\text{V}, I_C=1.0\text{mA}, R_S=50\Omega, f=60\text{MHz}$		6.0	dB

R5 (27-January 2010)

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SOT-23 CASE - MECHANICAL OUTLINE



LEAD CODE:

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

MARKING CODE: C3B

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)

R5 (27-January 2010)