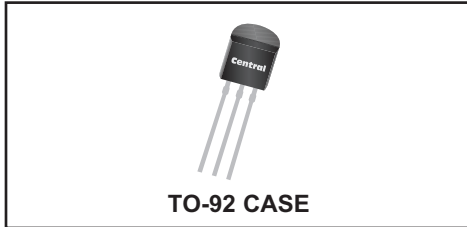


**PN918**  
**NPN SILICON RF TRANSISTOR**



**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR PN918 type is an NPN silicon RF transistor, manufactured by the epitaxial planar process and designed for high frequency amplifier and oscillator applications.

**MARKING: FULL PART NUMBER**

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

	SYMBOL		UNITS
Collector-Base Voltage	$V_{CBO}$	30	V
Collector-Emitter Voltage	$V_{CEO}$	15	V
Emitter-Base Voltage	$V_{EBO}$	3.0	V
Continuous Collector Current	$I_C$	50	mA
Power Dissipation	$P_D$	625	mW
Power Dissipation ( $T_C=25^\circ\text{C}$ )	$P_D$	1.0	W
Operating and Storage Junction Temperature	$T_J, T_{stg}$	-65 to +150	$^\circ\text{C}$
Thermal Resistance	$\theta_{JA}$	2.0	$^\circ\text{C/W}$
Thermal Resistance	$\theta_{JC}$	12.5	$^\circ\text{C/W}$

**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
$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$		1.7	pF
$C_{ob}$	$V_{EB}=0, I_E=0, f=1.0\text{MHz}$		3.0	pF
$C_{ib}$	$V_{EB}=0.5\text{V}, I_C=0, f=1.0\text{MHz}$		2.0	pF
$P_o$	$V_{CB}=15\text{V}, I_C=8.0\text{mA}, f=500\text{MHz}$	30		mW
$G_{pe}$	$V_{CB}=12\text{V}, I_C=6.0\text{mA}, f=200\text{MHz}$	15		dB
$\eta$	$V_{CB}=15\text{V}, I_C=8.0\text{mA}, f=500\text{MHz}$	25		%
NF	$V_{CE}=6.0\text{V}, I_C=1.0\text{mA}, R_G=400\Omega, f=60\text{kHz}$		6.0	dB

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**TO-92 CASE - MECHANICAL OUTLINE**



R1

SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A (DIA)	0.175	0.205	4.45	5.21
B	0.170	0.210	4.32	5.33
C	0.500	-	12.70	-
D	0.016	0.022	0.41	0.56
E	0.100		2.54	
F	0.050		1.27	
G	0.125	0.165	3.18	4.19
H	0.080	0.105	2.03	2.67
I	0.015		0.38	

TO-92 (REV: R1)

**LEAD CODE:**

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

**MARKING:**

**FULL PART NUMBER**

R0 (11-September 2012)