

# Central<sup>TM</sup> Semiconductor Corp.

145 Adams Avenue, Hauppauge, NY 11788 USA  
Tel: (631) 435-1110 • Fax: (631) 435-1824

Manufacturers of World Class Discrete Semiconductors

2N918 TO-72 CASE  
PN918 TO-92 CASE (EBC)

NPN SILICON RF TRANSISTORS

## DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N/PN918 types are NPN silicon RF transistors, manufactured by the epitaxial planar process and designed for high frequency amplifier and oscillator applications.

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

	<u>SYMBOL</u>	<u>2N918</u>	<u>PN918</u>	<u>UNIT</u>
Collector-Base Voltage	$V_{CB0}$	30	30	V
Collector-Emitter Voltage	$V_{CE0}$	15	15	V
Emitter-Base Voltage	$V_{EBO}$	3.0	3.0	V
Collector Current	$I_C$	50	50	mA
Power Dissipation	$P_D$	200	625	mW
Power Dissipation ( $T_C=25^\circ\text{C}$ )	$P_D$	300	1000	mW
Operating and Storage				
Junction Temperature	$T_J, T_{STG}$	-65 to +200	-65 to +150	$^\circ\text{C}$
Thermal Resistance	$\theta_{JA}$	87.5	2.0	$^\circ\text{C}/\text{W}$
Thermal Resistance	$\theta_{JC}$	58.3	12.5	$^\circ\text{C}/\text{W}$

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

<u>SYMBOL</u>	<u>TEST CONDITIONS</u>	<u>MIN</u>	<u>MAX</u>	<u>UNIT</u>
$I_{CBO}$	$V_{CB}=15\text{V}$		10	nA
$I_{CBO}$	$V_{CB}=15\text{V}, T_A=150^\circ\text{C}$ (2N918 only)		1.0	$\mu\text{A}$
$BV_{CB0}$	$I_C=1.0\mu\text{A}$	30		V
$BV_{CE0}$	$I_C=3.0\text{mA}$	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	$V_{CE}=6.0\text{V}, I_C=1.0\text{mA}, R_G=400\Omega, f=60\text{MHz}$		6.0	dB

This datasheet has been download from:

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

Datasheets for electronics components.