

2N918

**NPN SILICON RF TRANSISTOR**



**TO-72 CASE**



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

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR 2N918 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	$P_D$	200	mW
Power Dissipation ( $T_C=25^{\circ}\text{C}$ )	$P_D$	300	mW
Operating and Storage Junction Temperature	$T_J, T_{stg}$	-65 to +200	$^{\circ}\text{C}$
Thermal Resistance	$\Theta_{JA}$	87.5	$^{\circ}\text{C/W}$
Thermal Resistance	$\Theta_{JC}$	58.3	$^{\circ}\text{C/W}$

**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
$I_{CBO}$	$V_{CB}=15\text{V}, T_A=150^{\circ}\text{C}$		1.0	$\mu\text{A}$
$BV_{CBO}$	$I_C=1.0\mu\text{A}$	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

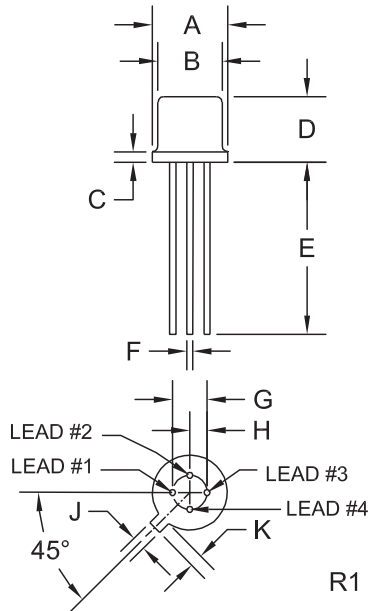
R1 (11-September 2012)

2N918

NPN SILICON RF TRANSISTOR



TO-72 CASE - MECHANICAL OUTLINE



DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A (DIA)	0.209	0.230	5.31	5.84
B (DIA)	0.175	0.195	4.45	4.95
C	-	0.030	-	0.76
D	0.170	0.210	4.32	5.33
E	0.500	-	12.70	-
F (DIA)	0.016	0.019	0.41	0.48
G (DIA)	0.100		2.54	
H	0.050		1.27	
J	0.036	0.046	0.91	1.17
K	0.028	0.048	0.71	1.22

TO-72 (REV: R1)

LEAD CODE:

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

MARKING:

FULL PART NUMBER

R1 (11-September 2012)

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