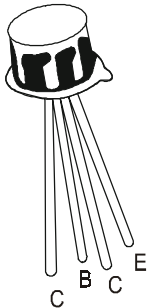


## NPN SILICON PLANAR RF TRANSISTOR

2N918



TO-72  
Metal Can Package

**NPN TRANSISTORS, BEST SUITED FOR LOW NOISE VHF AND VHF AMPLIFIER MIXER AND OSCILLATOR APPLICATIONS.**

**ABSOLUTE MAXIMUM RATINGS(Ta=25°C unless specified otherwise)**

DESCRIPTION	SYMBOL	VALUE	UNIT
Collector Base Voltage	$V_{CBO}$	30	V
Collector Emitter Voltage	$V_{CEO}$	15	V
Emitter Base Voltage	$V_{EBO}$	3	V
Collector Current (Continuous)	$I_C$	50	mA
Total Power Dissipation @ Ta=25°C	$P_D$	200	mW
Derate above 25°C		1.14	mW/°C
Total Device Dissipation@ Tc=25°C	$P_D$	300	W
Derate Above 25°C		1.71	mW/°C
Operating & Storage Junction Temperature Range	$T_j, T_{stg}$	-65 to +200	°C

**ELECTRICAL CHARACTERISTICS (Ta=25°C unless specified otherwise )**

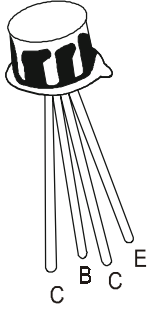
DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Collector Emitter (sus) Voltage	$BV_{CEO(sus)}$	$I_C=3mA, I_B=0$	15			V
Collector Base Breakdown Voltage	$BV_{CBO}$	$I_C=1\mu A, I_E=0$	30			V
Emitter Base Breakdown Voltage	$BV_{EBO}$	$I_E=10\mu A, I_C=0$	3.0			V
Collector Cut off Current	$I_{CBO}$	$V_{CB}=15V, I_E=0$			10	nA
		$V_{CB}=15V, I_E=0, T_a=150^\circ C$			10	$\mu A$
Collector Emitter (Sat) Voltage	$V_{CE(sat)}$	$I_C=10mA, I_B=1mA$			0.4	V
Base Emitter (Sat) Voltage	$V_{BE(sat)}$	$I_C=10mA, I_B=1mA$			1.0	V
DC Current Gain	$h_{FE}$	$I_C=3mA, V_{CE}=1V$	20			

### DYNAMIC CHARACTERISTICS

Out Put Capacitance	$C_{ob}$	$V_{CB}=10V, I_E=0, f=140kHz$		1.7	pF
		$V_{CB}=0, I_E=0, f=140kHz$		3.0	pF
Input Capacitance	$C_{ib}$	$V_{EB}=0.5V, I_C=0, f=140kHz$		2.0	pF
High Bandwidth Product	$f_T$	$I_C=4mA, V_{CE}=10V, f=10MHz$	600		MHz
Noise Figure	NF	$I_C=1mA, V_{CE}=6V$			
		$R_G=400\Omega, f=60MHz$		6.0	dB

# NPN SILICON PLANAR RF TRANSISTOR

2N918



TO-72  
Metal Can Package

## DYNAMIC CHARACTERISTICS

<b>Out Put Capacitance</b>	$C_{ob}$	$V_{CB}=10V, I_E=0, f=140kHz$	1.7	pF
		$V_{CB}=0, I_E=0, f=140kHz$	3.0	pF
<b>Input Capacitance</b>	$C_{ib}$	$V_{EB}=0.5V, I_C=0, f=140kHz$	2.0	pF
<b>High Bandwidth Product</b>	$f_T$	$I_C=4mA, V_{CE}=10V, f=10MHz$	600	MHz
<b>Noise Figure</b>	NF	$I_C=1mA, V_{CE}=6V$		
		$R_G=400\Omega, f=60MHz$	6.0	dB

## FUNCTIONAL TEST

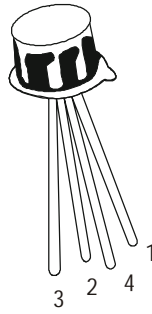
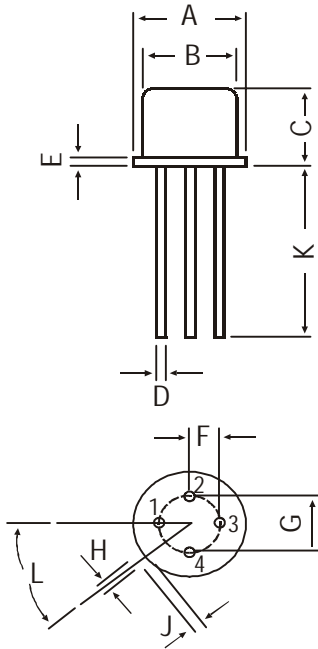
<b>Power Gain</b>	$G_{pe}$	$V_{CB}=12V, I_C=6mA, f=200MHz$	15	dB
<b>Power Output</b>	$P_O$	$V_{CB}=12V, I_C=8mA, f=500MHz$	30	mW
<b>Collector Efficiency</b>	n	$V_{CB}=15V, I_C=8mA, f=500MHz$	25	%

**2N918**

**TO-72**

**Metal Can Package**

**TO-72 Metal Can Package**



**PIN CONFIGURATION**

1. EMITTER
2. BASE
3. COLLECTOR
4. CASE

All dimensions in mm.

DIM	MIN.	MAX.
A	5.24	5.84
B	4.52	4.95
C	4.31	5.33
D	0.40	0.53
E	—	0.76
F	1.14	1.39
G	2.28	2.97
H	0.91	1.17
J	0.71	1.22
K	12.70	—
L	12 DEG	48 DEG

**Packing Detail**

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
TO-72	1 K/Polybag	325 gm/1K pcs	3" x 7.5" x 7.5"	5K	17" x 15" x 13.5"	80K	32 kgs

### **Disclaimer**

The product information and the selection guides facilitate selection of the CDIL's Discrete Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished in the Data Sheet and on the CDIL Web Site/CD is believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Discrete Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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