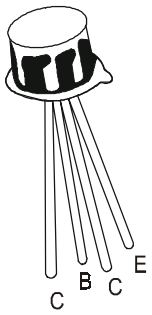
NPN SILICON PLANAR RF TRANSISTOR

2N918



TO-72
Metal Can Package

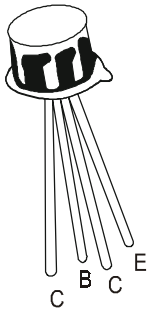
NPN TRANSISTORS, BEST SUITED FOR LOW NOISE VHF AND VHF AMPLIFIER MIXER AND OSCILLATOR APPLICATIONS.

ABSOLUTE MAXIMUM RATINGS(Ta=25ºC 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=25ºC	P_D	200	mW
Derate above 25ºC		1.14	mW/ºC
Total Device Dissipation@ Tc=25ºC	P_D	300	W
Derate Above 25ºC		1.71	mW/ºC
Operating & Storage Junction Temperature Range	T_j, T_{stg}	-65 to +200	ºC

ELECTRICAL CHARACTERISTICS (Ta=25ºC 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=1µA, I_E=0	30			V
Emitter Base Breakdown Voltage	BV_{EBO}	I_E=10µA, 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, Ta=150ºC			10	µA
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=400Ω, f=60MHz			6.0	dB



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DYNAMIC CHARACTERISTICS

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FUNCTIONAL TEST

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

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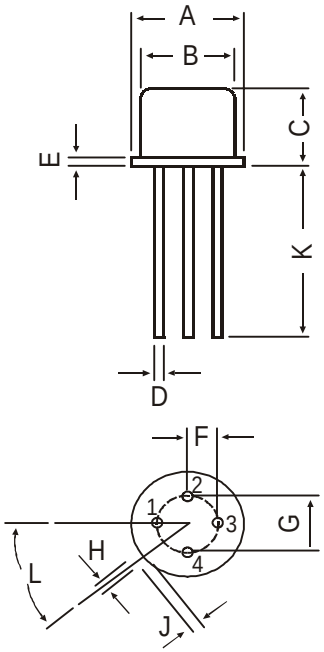

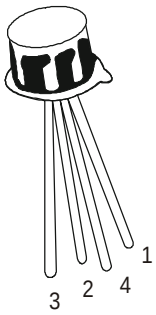

PIN CONFIGURATION
1. EMITTER
2. BASE
3. COLLECTOR
4. CASE

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

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Metal Can Package

Disclaimer

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Continental Device India Limited
C-120 Naraina Industrial Area, New Delhi 110 028, India.
Telephone + 91-11-2579 6150, 5141 1112 Fax + 91-11-2579 5290, 5141 1119
email@cdil.com www.cdilsemi.com

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