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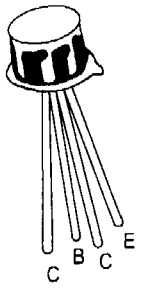
NPN SILICON PLANAR TRANSISTOR

2N917



TO-72
Metal Can Package

Amplifier Transistor

ABSOLUTE MAXIMUM RATINGS

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
Power Dissipation @ TA=25°C	P_D	200	mW
Derate Above 25°C		1.14	mW/°C
Power Dissipation @ T_C=25°C	P_D	300	mW
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 Sustaining Voltage	$V_{CEO(SUS)}$	I_C=3mA, I_B=0	15	-	-	V
Collector Base Voltage	V_{CBO}	I_C=1μA, I_E=0	30	-	-	V
Emitter Base Voltage	V_{EBO}	I_E=10μA, I_C=0	3.0		-	V
Collector Cut off Current	I_{CBO}	V_{CB}=15V, I_E=0	-	-	1.0	nA
		VCB=15V, IE=0, TA=150°C	-	-	1.0	μA
DC Current Gain	h_{FE}	I_C=3mA, V_{CE}=1V	20	-	200	
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=10mA, I_B=1mA	-	-	0.4	V
Base Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=10mA, I_B=1mA	-	-	1.0	V

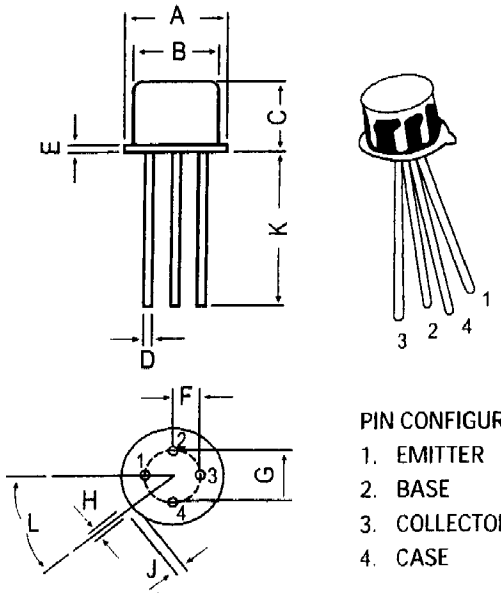
NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

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

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Small-Signal Characteristics						
Current - Gain - Bandwidth Product	f_T(1)	I_C=4mA,V_{CE}=10V,f=100MHz	600	-	-	MHz
OutPut Capacitance	C_{obo}	V_{CB}=10V, I_E=0, f=140kHz	-	-	2.0	pF
		V_{CB}=0V, I_E=0, f=140kHz	-	-	3.0	pF
InPut Capacitance	C_{ibo}	V_{EB}=0.5V, I_C=0, f=140kHz	-	-	2.0	pF
Noise Figure	NF	I_C=1mA, V_{CE}=6V, R_G=400 Ω, f=60MHz	-	-	6.0	dB
Functional Test						
Amplifier Power Gain	G_{pe}	V_{CB}=12V, I_C=6mA, f=200MHz	15	-	-	dB
Power Output	P_O	V_{CB}=15V, I_C=8mA, f=500MHz	30	-	-	mW
Collector Efficiency	π	V_{CB}=15V, I_C=8mA, f=500MHz	25	-	-	%

(1) fT is defined as the frequency at which $|h_{fe}|$ extrapolates to unity.

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