



JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

TO-92S Plastic-Encapsulate Transistors

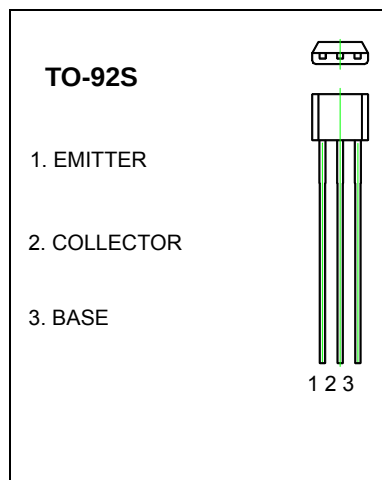
2SC2999 TRANSISTOR (NPN)

FEATURES

.High f_T ($f_T=750\text{MHz}$ typ) and small C_{re} ($C_{re}=0.6\text{pF}$ typ)

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

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	25	V
V_{CEO}	Collector-Emitter Voltage	20	V
V_{EBO}	Emitter-Base Voltage	3	V
I_C	Collector Current -Continuous	30	mA
P_C	Collector Power Dissipation	400	mW
T_J	Junction Temperature	125	$^\circ\text{C}$
T_{stg}	Storage Temperature	-40-125	$^\circ\text{C}$



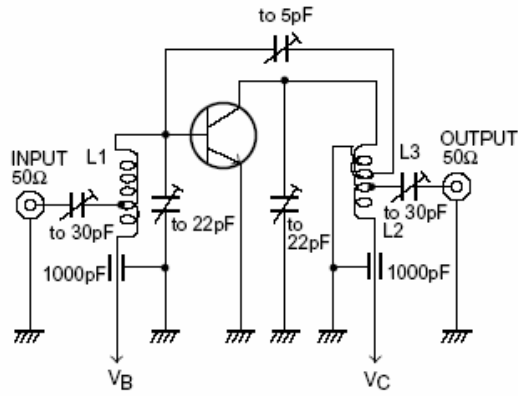
ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}$, $I_E=0$	25			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}$, $I_B=0$	20			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}$, $I_C=0$	3			V
Collector cut-off current	I_{CBO}	$V_{CB}=10\text{V}$, $I_E=0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=3\text{V}$, $I_C=0$			0.1	μA
DC current gain	h_{FE}	$V_{CE}=6\text{V}$, $I_C=1\text{mA}$	40		200	
Transition frequency	f_T	$V_{CE}=6\text{V}$, $I_C=4\text{mA}$	450	750		MHz
Reverse Transfer Capacitance	C_{re}	$V_{CB}=6\text{V}$, $f=1\text{MHz}$		0.6	0.9	pF
Base-to-Collector Time Constant	$r_{bb'}c_c$	$V_{CE}=6\text{V}$, $I_C=1\text{mA}$, $f=31.9\text{MHz}$			19	ps
Noise figure	NF	$V_{CE}=6\text{V}$, $I_C=1\text{mA}$, $f=100\text{MHz}$		2.2		dB

CLASSIFICATION OF h_{FE}

Rank	C	D	E
Range	40-80	60-120	100-200

NF, PG Test Circuit



- L1 : 1mmø plated wire, 10mmø 5T, pitch 15mm, tapped at 2T from base side.
- L2 : 1mmø plated wire, 10mmø 7T, pitch 10mm, tapped at 2T from V_C side.
- L3 : 1mmø enameled wire, 10mmø 3T, pitch 10mm.

