



JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

TO-92S Plastic-Encapsulate Transistors

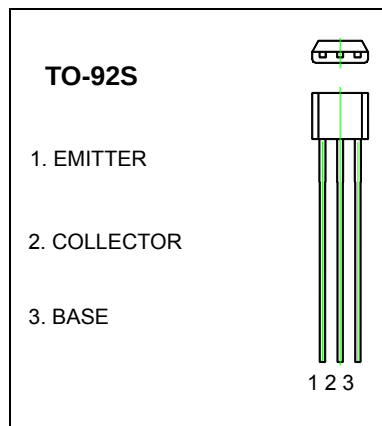
2SC2839 TRANSISTOR (NPN)

FEATURES

.High f_T and small C_{re} ($f_T=320\text{MHz}$ typ, $C_{re}=0.95\text{pF}$ typ).

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

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	30	V
V_{CEO}	Collector-Emitter Voltage	20	V
V_{EBO}	Emitter-Base Voltage	5	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	-55-125	$^\circ\text{C}$



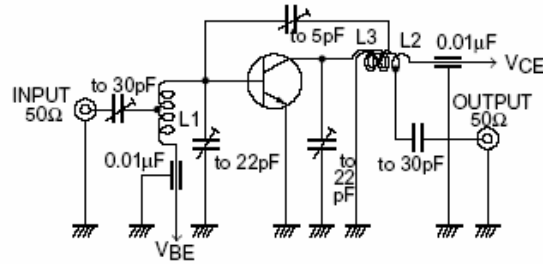
ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}$, $I_E=0$	30			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}$, $I_B=0$	20			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}$, $I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=10\text{V}$, $I_E=0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=4\text{V}$, $I_C=0$			0.1	μA
DC current gain	h_{FE}	$V_{CE}=6\text{V}$, $I_C=1\text{mA}$	60		320	
Transition frequency	f_T	$V_{CE}=6\text{V}$, $I_C=1\text{mA}$	200	320		MHz
Reverse Transfer Capacitance	C_{re}	$V_{CB}=6\text{V}$, $f=1\text{MHz}$	0.7	0.95	1.3	pF
Base-to-Collector Time Constant	$r_{bb'}C_C$	$V_{CE}=6\text{V}$, $I_C=1\text{mA}$, $f=31.9\text{MHz}$		12	20	ps
Noise figure	NF	$V_{CE}=6\text{V}$, $I_C=1\text{mA}$, $f=100\text{MHz}$		3.0		dB
Power Gain	P_G	$V_{CE}=6\text{V}$, $I_C=1\text{mA}$, $f=100\text{MHz}$		25		dB

CLASSIFICATION OF h_{FE}

Rank	D	E	F
Range	60-120	100-200	160-320

NF, PG Test Circuit



L1 : 1mmø plated wire, 10mmø 5T tap, 2T from VBE side.

L2 : 1mmø plated wire, 10mmø 7T tap, 1T from VCE side.

L3 : 1mmø enameled wire, 10mmø 3T .

