



JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

TO-92S Plastic-Encapsulate Transistors

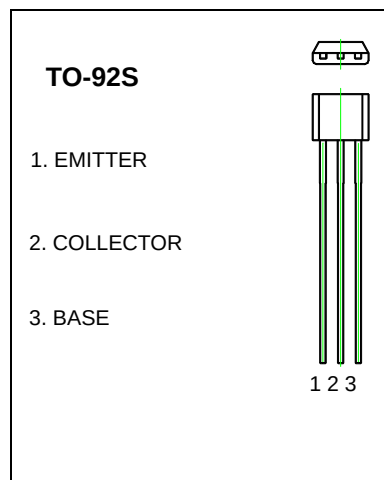
2SC1740S TRANSISTOR (NPN)

FEATURES

- Low Cob

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

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	50	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current –Continuous	150	mA
P_C	Collector Dissipation	300	mW
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55-150	$^{\circ}\text{C}$



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

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=50\mu\text{A}$, $I_E=0$	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}$, $I_B=0$	50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=50\mu\text{A}$, $I_C=0$	7			V
Collector cut-off current	I_{CBO}	$V_{CB}=60\text{V}$, $I_E=0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=7\text{V}$, $I_C=0$			0.1	μA
DC current gain	h_{FE}	$V_{CE}=6\text{V}$, $I_C=1\text{mA}$	120		560	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=50\text{mA}$, $I_B=5\text{mA}$			0.4	V
Transition frequency	f_T	$V_{CE}=12\text{V}$, $I_C=-2\text{mA}$, $f=100\text{MHz}$		180		MHz
Collector output capacitance	C_{ob}	$V_{CB}=12\text{V}$, $I_E=0$, $f=1\text{MHz}$		2	3.5	pF

CLASSIFICATION OF h_{FE}

Rank	Q	R	S
Range	120-270	180-390	270-560

Typical Characteristics

2SC1740S

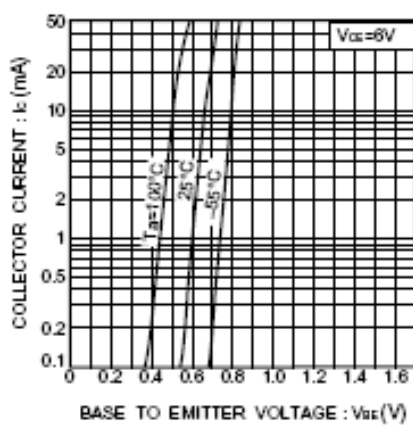


Fig.1 Grounded emitter propagation characteristics

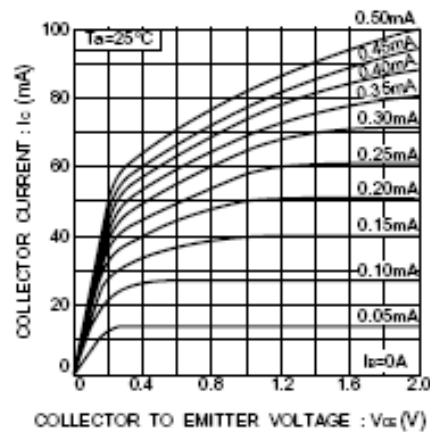


Fig.2 Grounded emitter output characteristics (I)

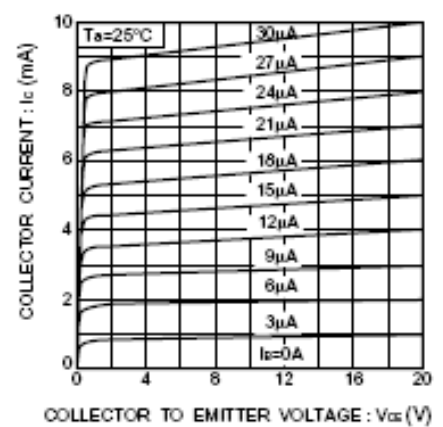


Fig.3 Grounded emitter output characteristics (II)

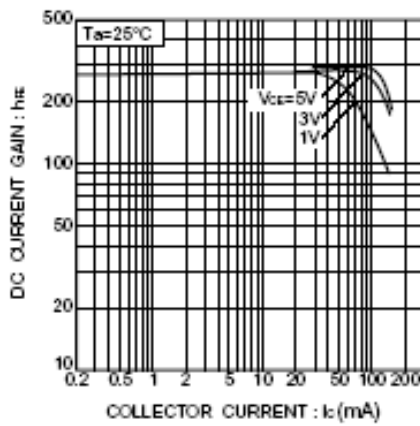


Fig.4 DC current gain vs. collector current (I)

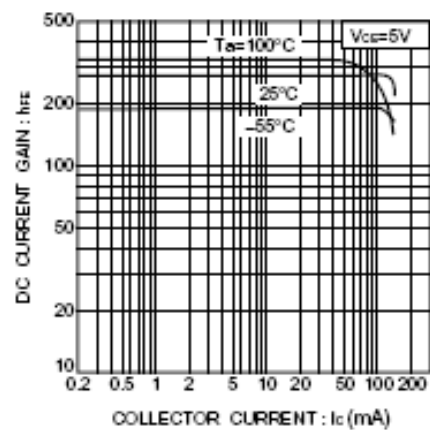


Fig.5 DC current gain vs. collector current (II)

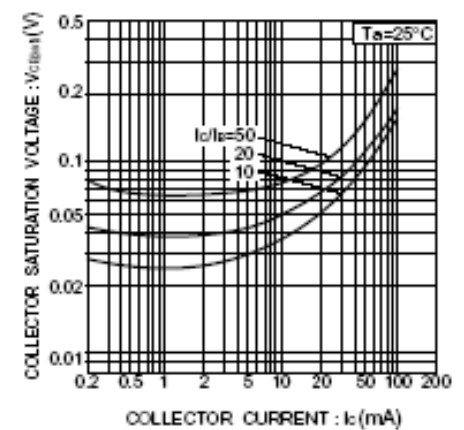


Fig.6 Collector-emitter saturation voltage vs. collector current

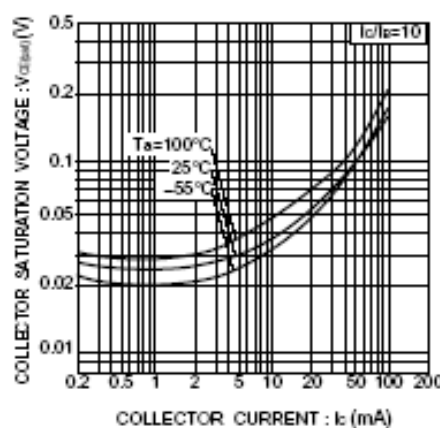


Fig.7 Collector-emitter saturation voltage vs. collector current (I)

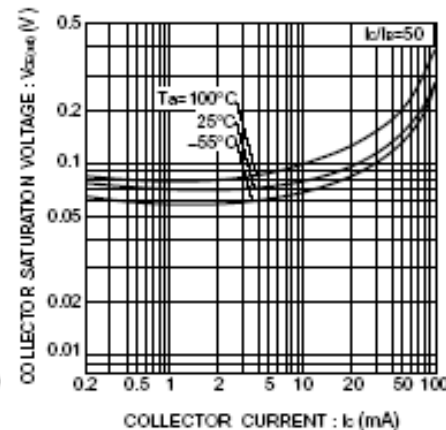


Fig.8 Collector-emitter saturation voltage vs. collector current (II)

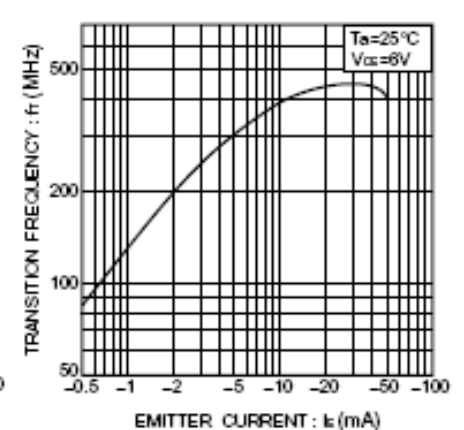


Fig.9 Gain bandwidth product vs. emitter current