

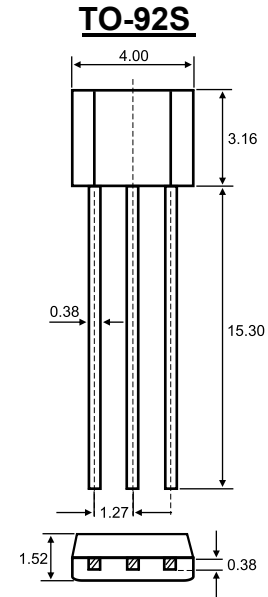
1. EMITTER
2. COLLECTOR
3. BASE

Features

- ✧ Low Cob

MAXIMUM RATINGS (T_A=25°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 Power Dissipation	300	mW
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55-150	°C



Dimensions in inches and (millimeters)

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

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =50μA, I _E =0	60			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =1mA, I _B =0	50			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =50μA, I _C =0	7			V
Collector cut-off current	I _{CBO}	V _{CB} =60V, I _E =0			0.1	μA
Emitter cut-off current	I _{EBO}	V _{EB} =7V, I _C =0			0.1	μA
DC current gain	h _{FE}	V _{CE} =6V, I _C =1mA	120		560	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =50mA, I _B =5mA			0.4	V
Transition frequency	f _T	V _{CE} =12V, I _C =-2mA, f=100MHz		180		MHz
Collector output capacitance	C _{ob}	V _{CB} =12V, I _E =0, f=1MHz		2	3.5	pF

CLASSIFICATION OF h_{FE}

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

Typical Characteristics

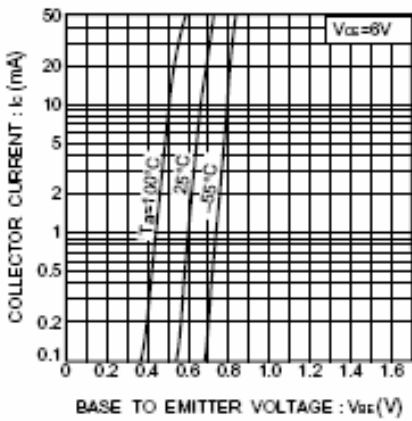


Fig.1 Grounded emitter propagation characteristics

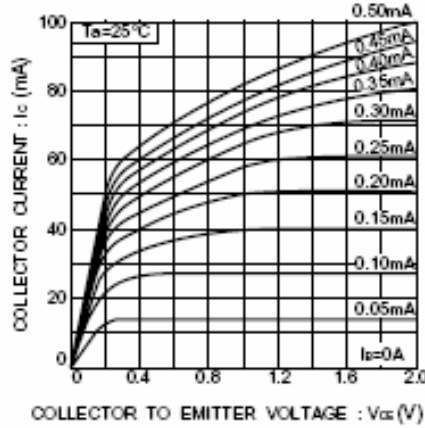


Fig.2 Grounded emitter output characteristics (I)

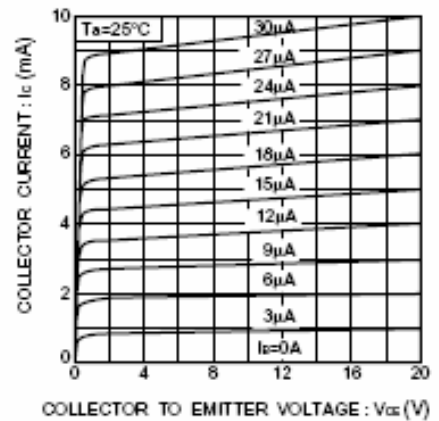


Fig.3 Grounded emitter output characteristics (II)

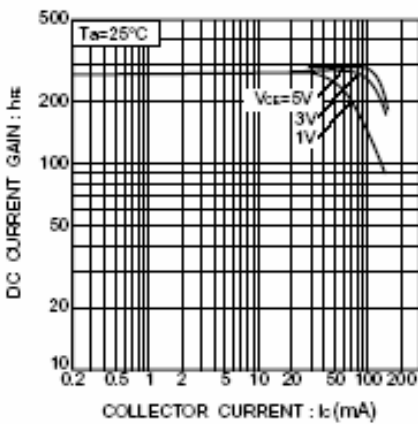


Fig.4 DC current gain vs. collector current (I)

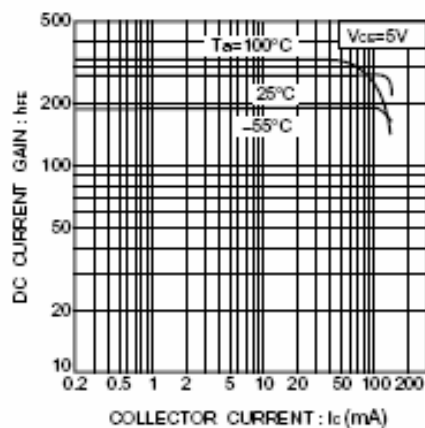


Fig.5 DC current gain vs. collector current (II)

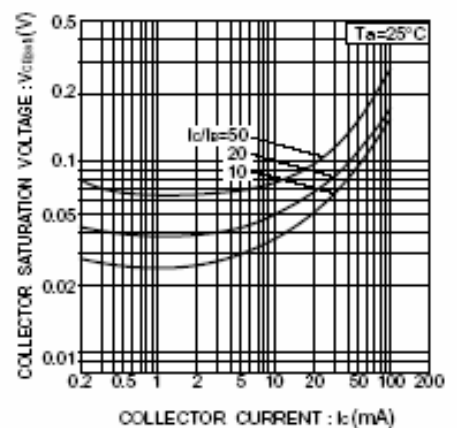


Fig.6 Collector-emitter saturation voltage vs. collector current

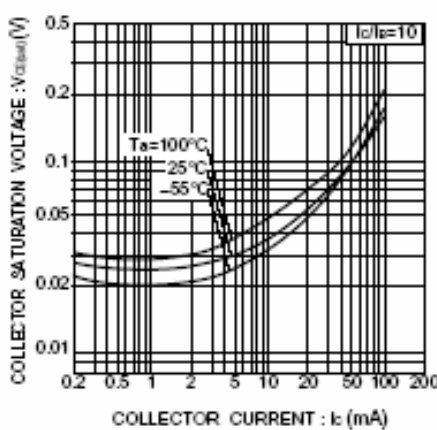


Fig.7 Collector-emitter saturation voltage vs. collector current (I)

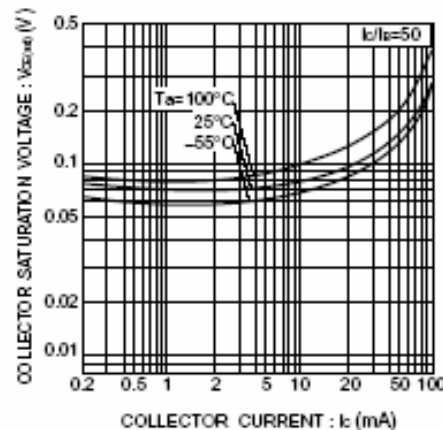


Fig.8 Collector-emitter saturation voltage vs. collector current (II)

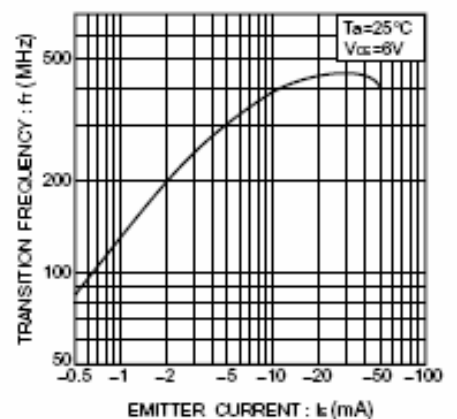


Fig.9 Gain bandwidth product vs. emitter current

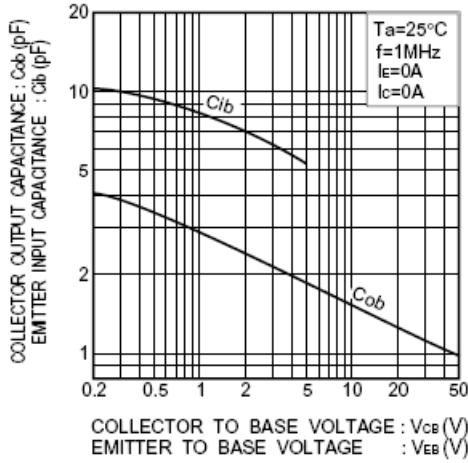


Fig.10 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage

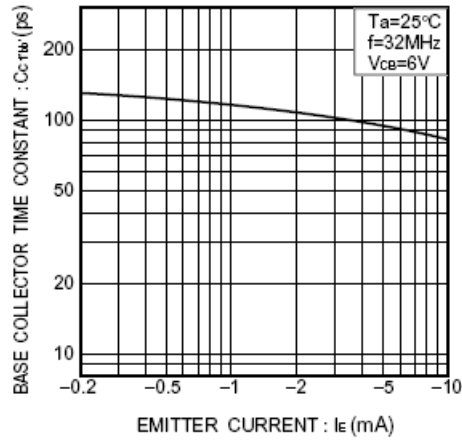


Fig.11 Base-collector time constant vs. emitter current

Package	Packing	Quantity	Box	Box Size(mm)	Carton	Carton Size(mm)
TO-92S	Bulk	1000pcs/BP	10000pcs	245×170×100	100,000pcs	525×375×270
TO-92S	Tape	3000pcs/TP	3000pcs	333×162×43	30,000pcs	350×340×250