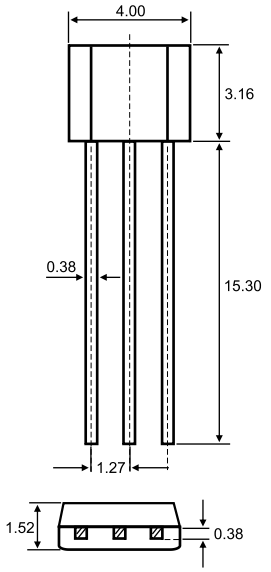
2SA1585S

TO-92S Transistor (PNP)

1 2 3

1. EMITTER
2. COLLECTOR
3. BASE

TO-92S



Dimensions in inches and (millimeters)

Features

- ✧ Low $V_{CE(sat)}$.$V_{CE(sat)}$ = 0.2V (Typ.)(I_C/I_B = 2A/0.1A)
- ✧ Excellent DC current gain characteristics.
- ✧ Power dissipation

MAXIMUM RATINGS (T_A=25℃ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	-20	V
V_{CEO}	Collector-Emitter Voltage	-20	V
V_{EBO}	Emitter-Base Voltage	-6	V
I_C	Collector Current -Continuous	-2	A
P_C	Collector Power Dissipation	400	mW
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55-150	℃

ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C= -50μA , I_E=0	-20			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C= -1mA , I_B=0	-20			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=- 50μA, I_C=0	-6			V
Collector cut-off current	I_{CBO}	V_{CB}=-20V , I_E=0			-0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}= -5V , I_C=0			-0.1	μA
DC current gain	h_{FE}	V_{CE}=-2V, I_C= -0.1A	120		560	
Collector-emitter saturation voltage	V_{CEsat}	I_C= -2A, I_B=-0.1A			-0.5	V
Transition frequency	f_T	V_{CE}=-2V, I_C=-0.5A F=100MHz	200			MHz

CLASSIFICATION OF h_{FE}

Rank	Q	R	s
Range	120-170	180-390	270-560

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Typical Characteristics

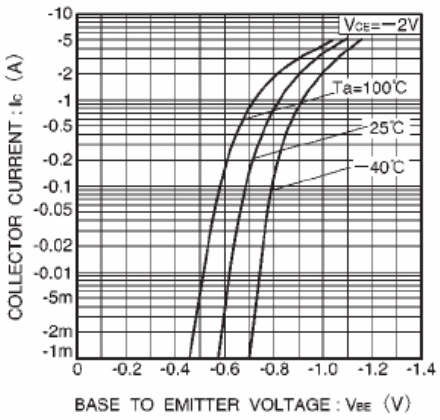

Fig.1 Grounded emitter propagation characteristics

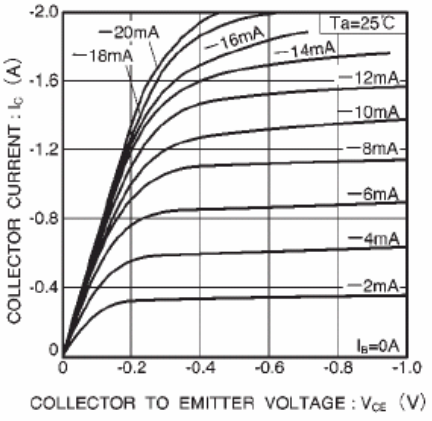

Fig.2 Grounded emitter output characteristics (Ⅰ)

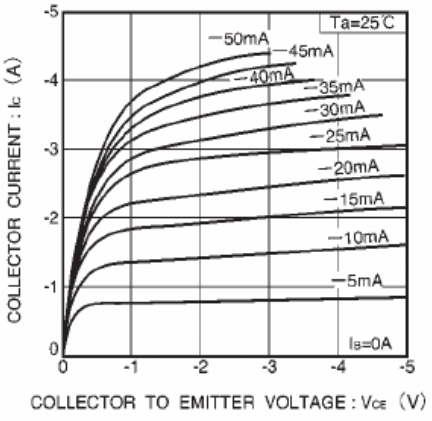

Fig.3 Grounded emitter output characteristics (Ⅱ)

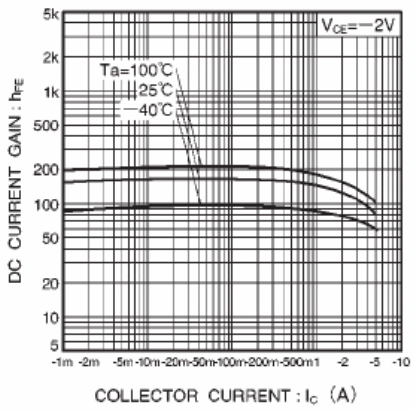

Fig.4 DC current gain vs. collector current

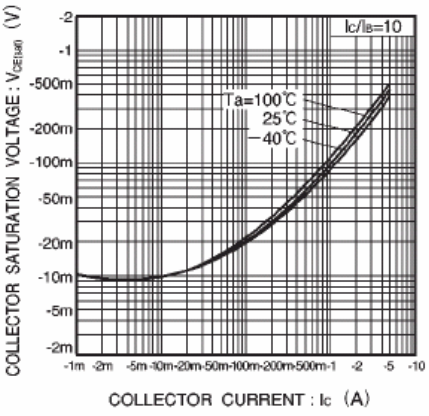

Fig.5 Collector-emitter saturation voltage vs. collector current (Ⅰ)

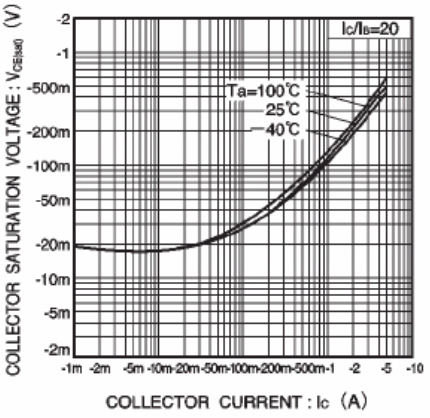

Fig.6 Collector-emitter saturation voltage vs. collector current (Ⅱ)

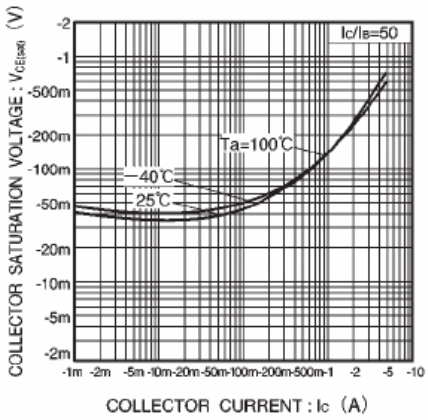

Fig.7 Collector-emitter saturation voltage vs. collector current (Ⅲ)

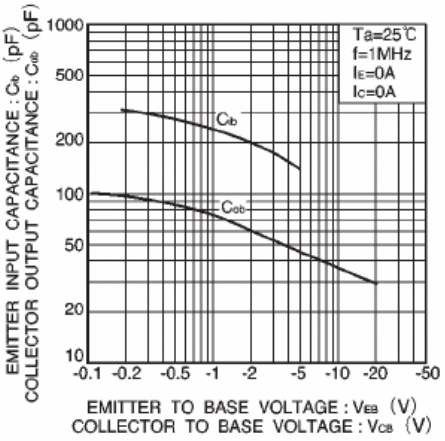

Fig.8 Gain bandwidth product vs. emitter current
Collector output capacitance vs. collector-base voltage

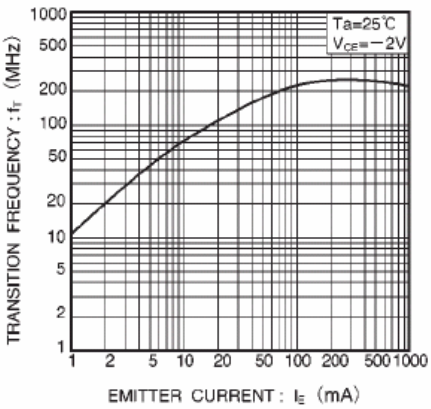

Fig.9 Emitter input capacitance vs. emitter base voltage