



JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

WBFBP-03A Plastic-Encapsulate Transistors

2SA1585E TRANSISTOR

DESCRIPTION

PNP Epitaxial planar type Silicon Transistor

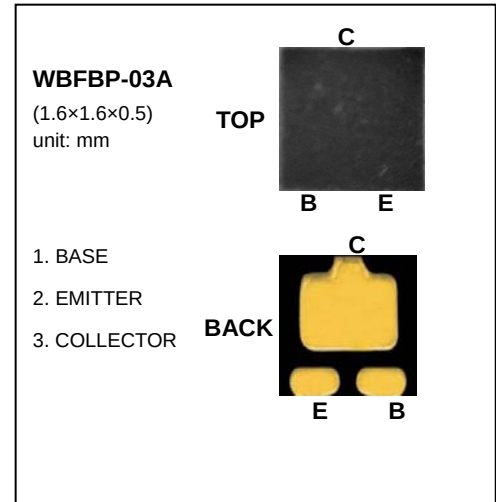
FEATURES

Low $V_{CE(sat)}$. $V_{CE(sat)} = -0.2V$ (Typ.) ($I_C/I_B = -2A/-0.1A$)

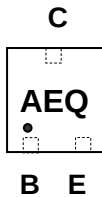
APPLICATION

Excellent current gain characteristics

For portable equipment:(i.e. Mobile phone,MP3, MD,CD-ROM, DVD-ROM, Note book PC, etc.)



MARKING:AEQ, AER, AES



MAXIMUM RATINGS $T_A=25^{\circ}C$ 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	150	mW
T_j	Junction Temperature	150	$^{\circ}C$
T_{stg}	Storage Temperature Range	-55-150	$^{\circ}C$

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

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -50\mu A, I_E = 0$	-20			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -1mA, I_B = 0$	-20			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -50\mu A, I_C = 0$	-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	$V_{CE} = -2V, I_C = -0.5A, f = 100MHz$		240		MHz
Collector output capacitance	C_{obo}	$V_{CB} = -10V, I_E = 0, f = 1MHz$		35		pF

CLASSIFICATION OF h_{FE}

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

Typical Characteristics

2SA1585E

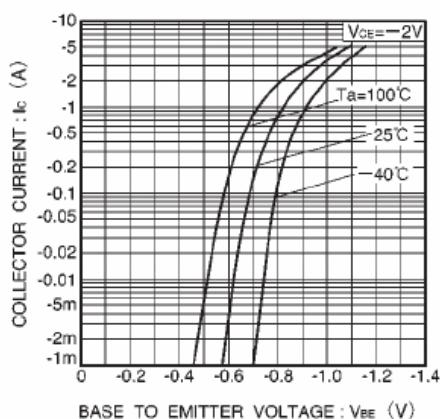


Fig.1 Grounded emitter propagation characteristics

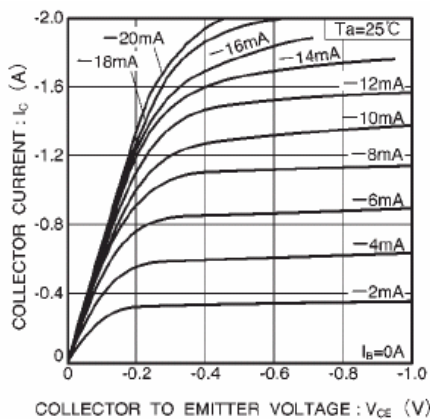


Fig.2 Grounded emitter output characteristics (I)

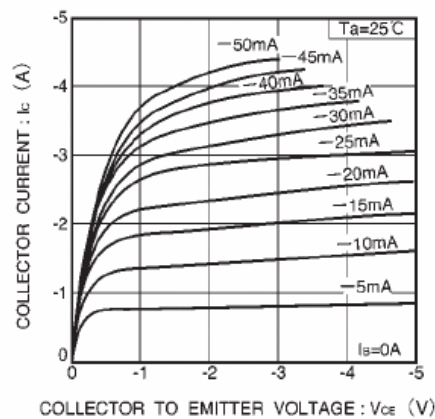


Fig.3 Grounded emitter output characteristics (II)

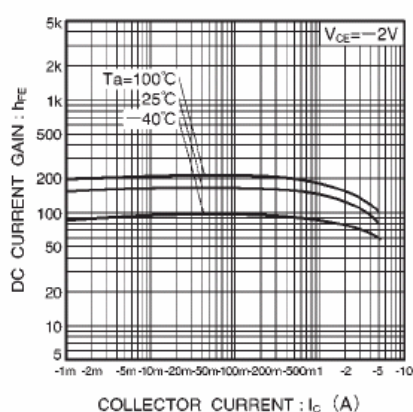


Fig.4 DC current gain vs. collector current

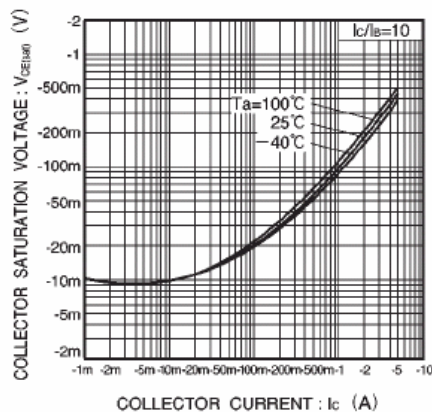


Fig.5 Collector-emitter saturation voltage vs. collector current (I)

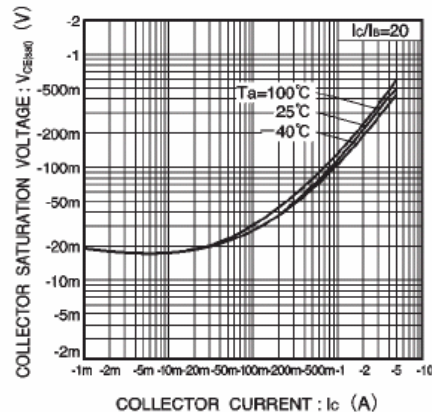


Fig.6 Collector-emitter saturation voltage vs. collector current (II)

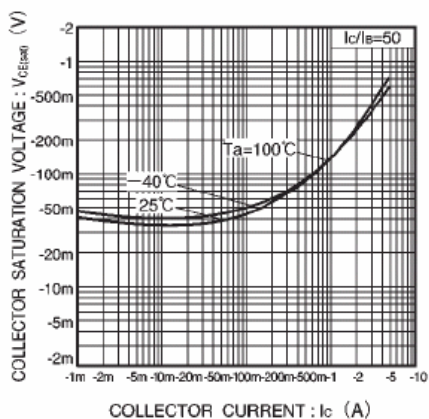


Fig.7 Collector-emitter saturation voltage vs. collector current (III)

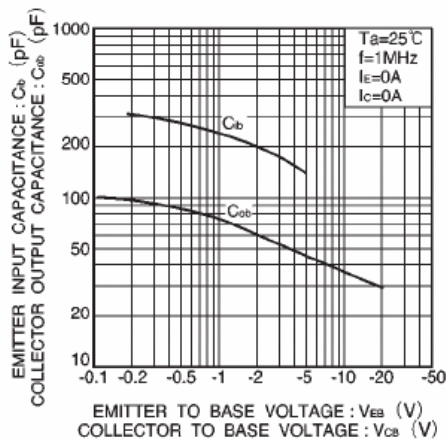


Fig.8 Gain bandwidth product vs. emitter current
Collector output capacitance vs. collector-base voltage

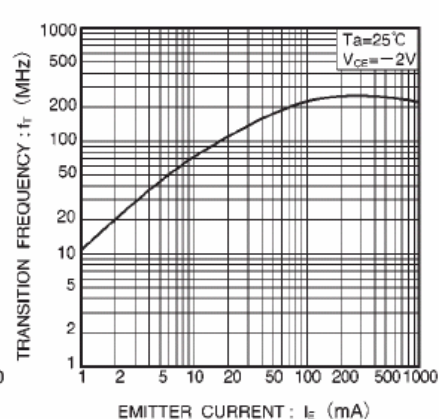


Fig.9 Emitter input capacitance vs. emitter base voltage