



JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

WBFBP-03B Plastic-Encapsulate Transistors

2SA2030 TRANSISTOR

DESCRIPTION

PNP Epitaxial planar Silicon Transistor

FEATURES

Collector current is large.

Collector saturation voltage is low.

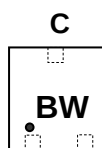
$V_{CE(sat)} \leq -250\text{mA}$ At $I_C = -200\text{mA}$ / $I_B = -10\text{mA}$

APPLICATION

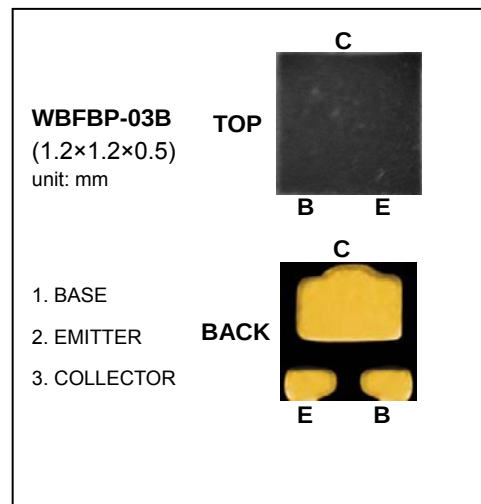
For switching, for muting.

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

MARKING: BW



B E



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

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	-15	V
V_{CEO}	Collector-Emitter Voltage	-12	V
V_{EBO}	Emitter-Base Voltage	-6	V
I_C	Collector Current -Continuous	-0.5	A
P_C	Collector Dissipation	0.15	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55-150	$^\circ\text{C}$

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

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -10\mu\text{A}$, $I_E = 0$	-15			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -1\text{mA}$, $I_B = 0$	-12			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -10\mu\text{A}$, $I_C = 0$	-6			V
Collector cut-off current	I_{CBO}	$V_{CB} = -15\text{V}$, $I_E = 0$			-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -6\text{V}$, $I_C = 0$			-0.1	μA
DC current gain	h_{FE}	$V_{CE} = -2\text{V}$, $I_C = -10\text{mA}$	270		680	
Collector-emitter saturation voltage	V_{CEsat}	$I_C = -200\text{mA}$, $I_B = -10\text{mA}$			-0.25	V
Transition frequency	f_T	$V_{CE} = -2\text{V}$, $I_C = -10\text{mA}$, $f = 100\text{MHz}$		260		MHz
Output capacitance	C_{ob}	$V_{CB} = -10\text{V}$, $I_E = 0$, $f = 1\text{MHz}$		6.5		pF

Typical Characteristics

2SA2030

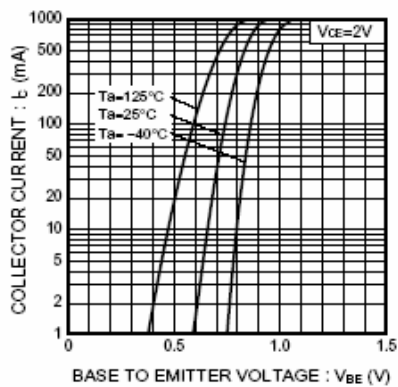


Fig.1 Grounded Emitter Propagation Characteristics

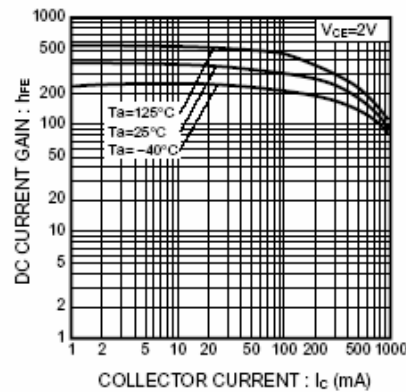


Fig.2 DC Current Gain vs. Collector Current

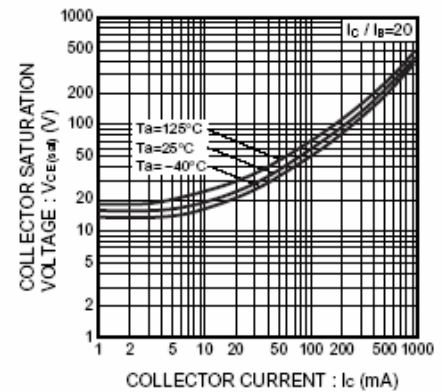


Fig.3 Collector-Emitter Saturation Voltage vs. Collector Current (I)

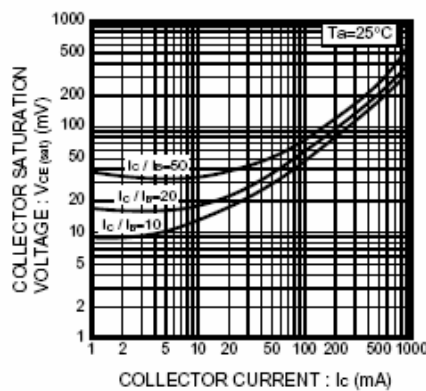


Fig.4 Collector-Emitter Saturation Voltage vs. Collector Current (II)

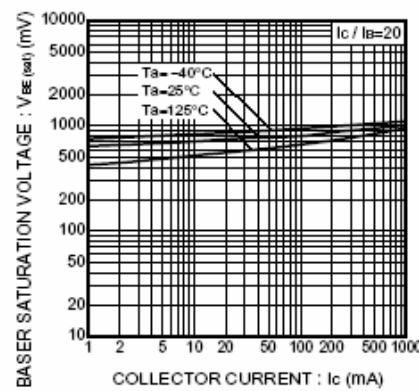


Fig.5 Base-Emitter Saturation Voltage vs. Collector Current

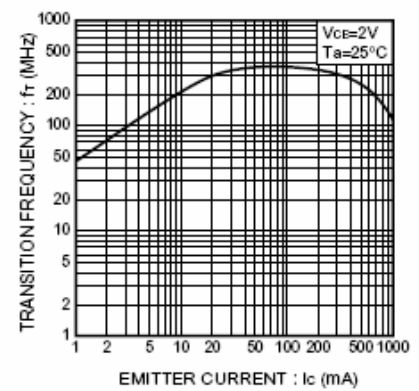


Fig.6 Gain Bandwidth Product vs. Emitter Current

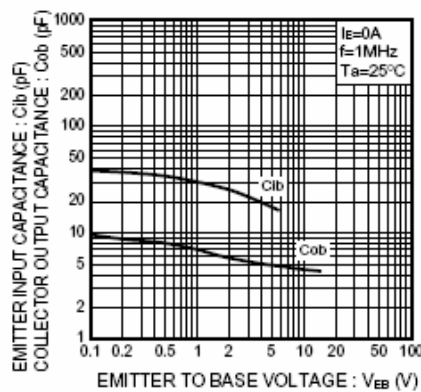


Fig.7 Collector Output Capacitance vs. Collector-Base Voltage
Emitter Input Capacitance vs. Emitter-Base Voltage