



2SB815 / 2SD1048

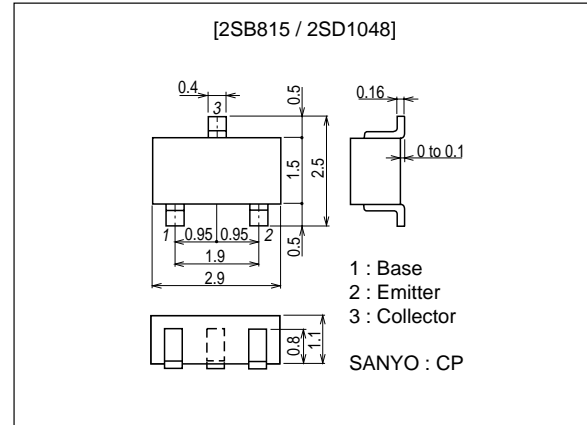
General-Purpose AF Amplifier Applications

Features

- Ultrasmall package allows miniaturization in end products.
- Large current capacity ($I_C=0.7A$) and low-saturation voltage.

Package Dimensions

unit : mm
2018B



Specifications

() : 2SB815

Absolute Maximum Ratings at $T_a=25^\circ C$

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		(-)20	V
Collector-to-Emitter Voltage	V_{CEO}		(-)15	V
Emitter-to-Base Voltage	V_{EBO}		(-)5	V
Collector Current	I_C		(-)0.7	A
Collector Current (Pulse)	I_{CP}		(-)1.5	A
Collector Dissipation	P_C		200	mW
Junction Temperature	T_j		125	$^\circ C$
Storage Temperature	T_{stg}		-55 to +125	$^\circ C$

Electrical Characteristics at $T_a=25^\circ C$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=-15V, I_E=0$			(-)0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=-4V, I_C=0$			(-)0.1	μA
DC Current Gain	h_{FE1}	$V_{CE}=-2V, I_C=-50mA$	(200*)200*		(600*)900*	
	h_{FE2}	$V_{CE}=-2V, I_C=-500mA$	80			

* : The 2SB815, 2SD1048 are classified by 50mA h_{FE} as follows :

Continued on next page.

2SB815	200	B6	400	300	B7	600		
2SD1048	200	X6	400	300	X7	600	450	X8 900

Note : Marking : B (2SB815), X (2SD1048)

h_{FE} rank : 6, 7 (2SB815), 6, 7, 8 (2SD1048)

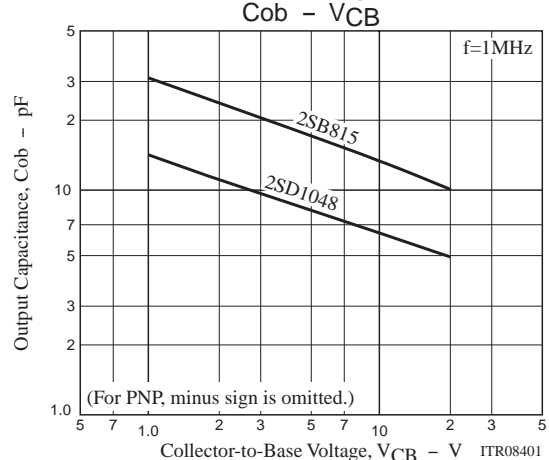
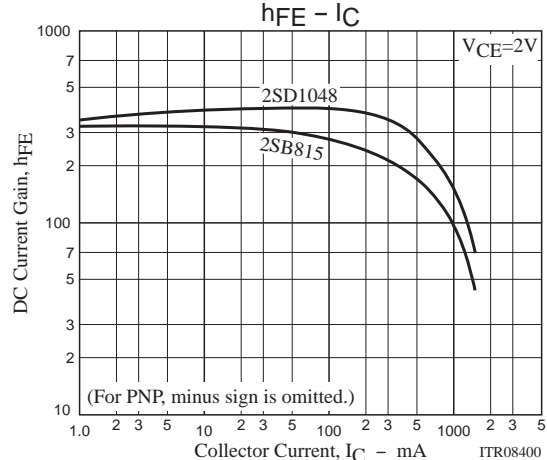
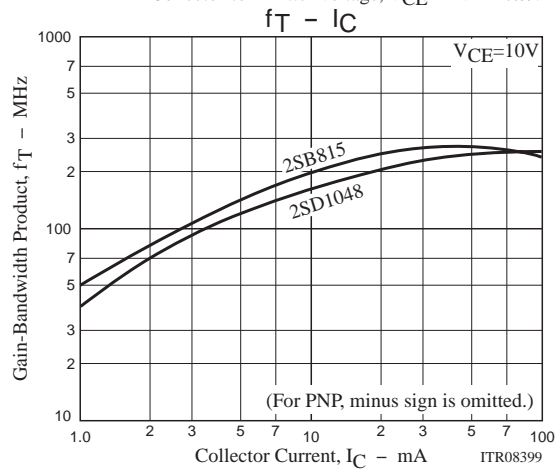
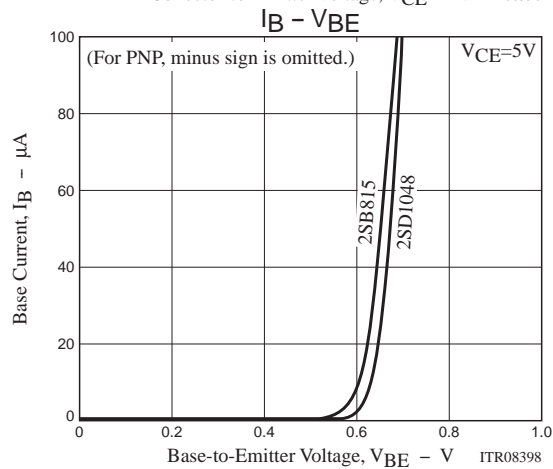
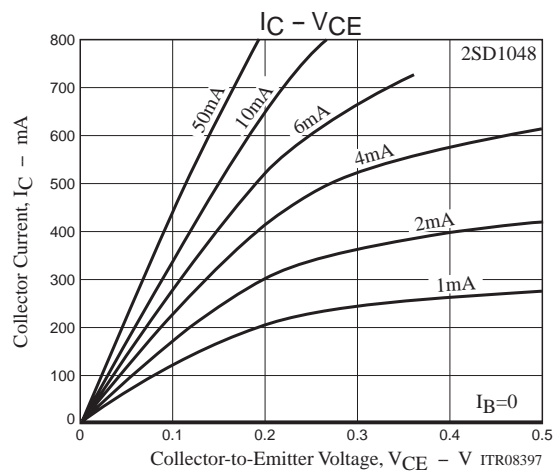
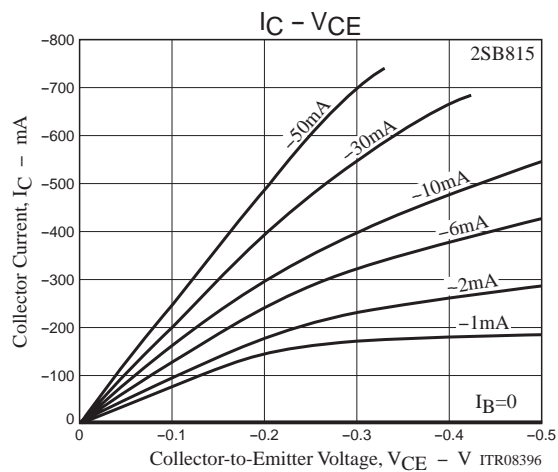
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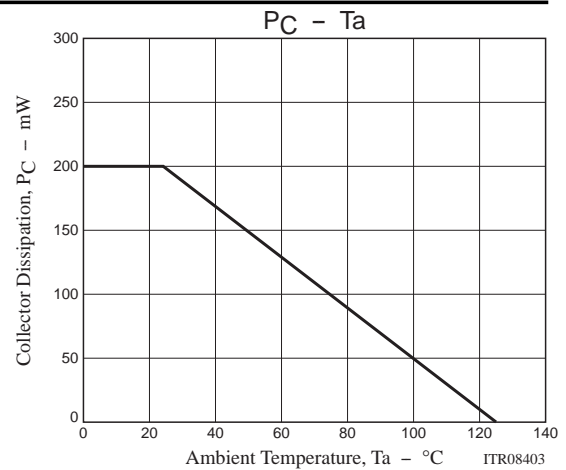
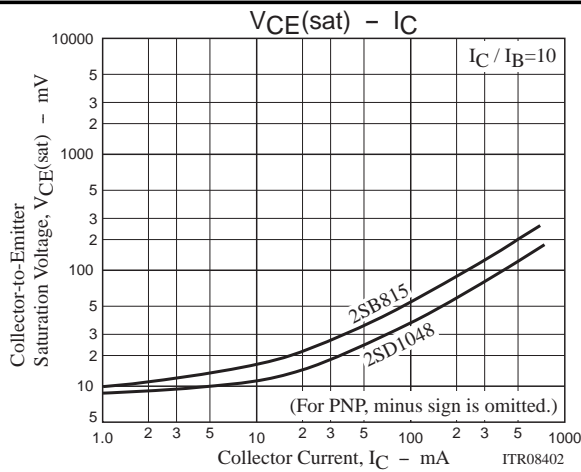
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Gain-Bandwidth Product	f_T	$V_{CE}=(-)10V, I_C=(-)50mA$		250		MHz
Output Capacitance	C_{ob}	$V_{CB}=(-)10V, f=1MHz$		(13)8		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)1}$	$I_C=(-)5mA, I_B=(-)0.5mA$		(-15)10	(-35)25	mV
	$V_{CE(sat)2}$	$I_C=(-)100mA, I_B=(-)10mA$		(-60)30	(-120)80	mV



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