



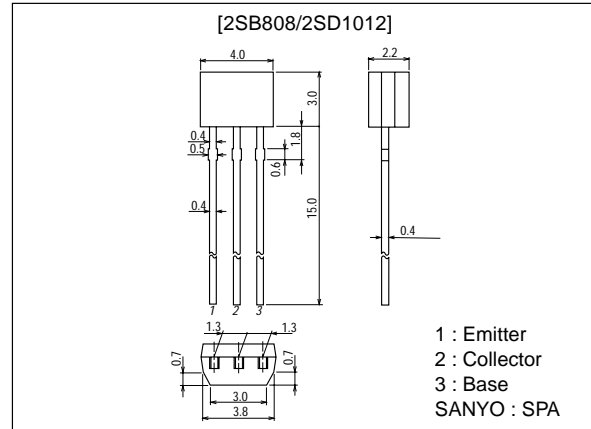
2SB808/2SD1012

Low-Voltage Large-Current Amplifier Applications

Package Dimensions

unit:mm

2033A



(): 2SB808

Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CB0}		(-) 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		250	mW
Junction Temperature	T_j		125	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to $+125$	$^\circ\text{C}$

Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB} = (-)15\text{V}, I_E = 0$			(-) 1.0	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = (-)4\text{V}, I_C = 0$			(-) 1.0	μA
DC Current Gain	h_{FE1}	$V_{CE} = (-)2\text{V}, I_C = (-)50\text{mA}$	160^*		960^*	
	h_{FE2}	$V_{CE} = (-)2\text{V}, I_C = (-)500\text{mA Pulse}$	80			
Gain-Bandwidth Product	f_T	$V_{CE} = (-)10\text{V}, I_C = (-)50\text{mA}$		250		MHz
Common Base Output Capacitance	C_{ob}	$V_{CB} = (-)10\text{V}, f = 1\text{MHz}$		(13)		pF
				8		pF

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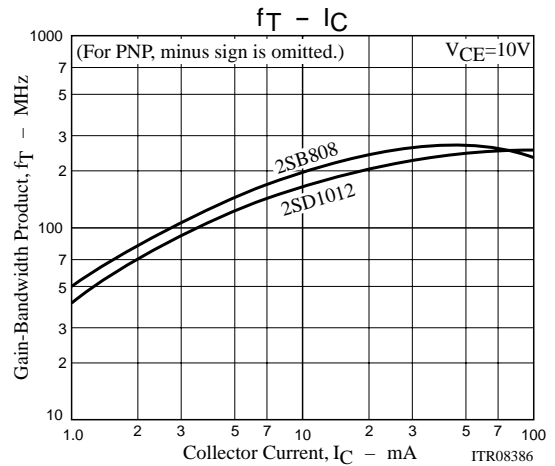
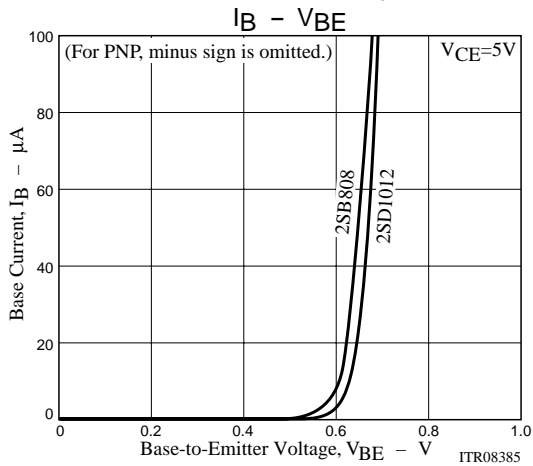
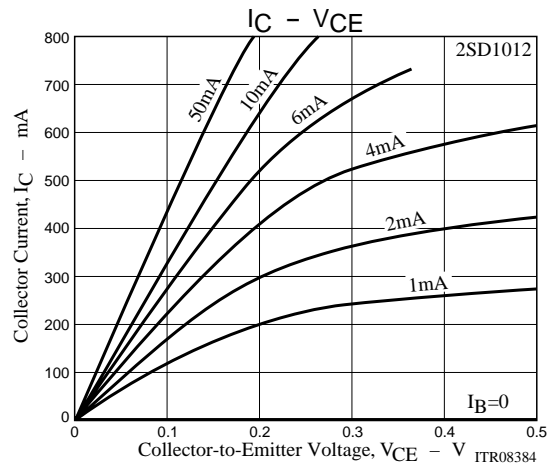
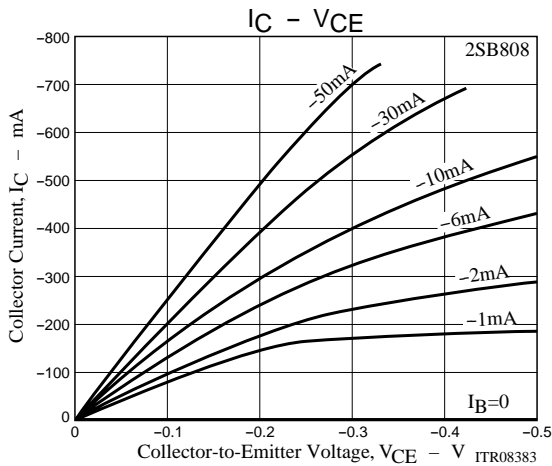
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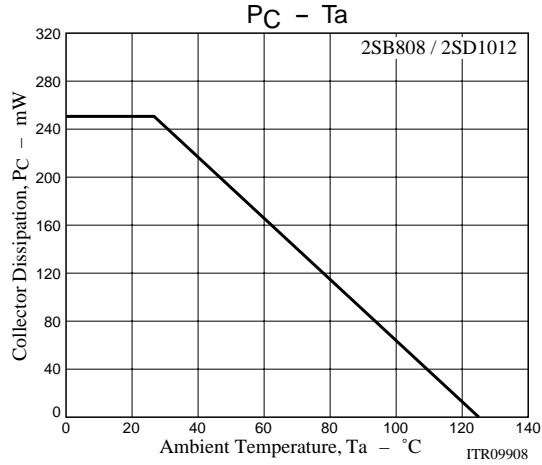
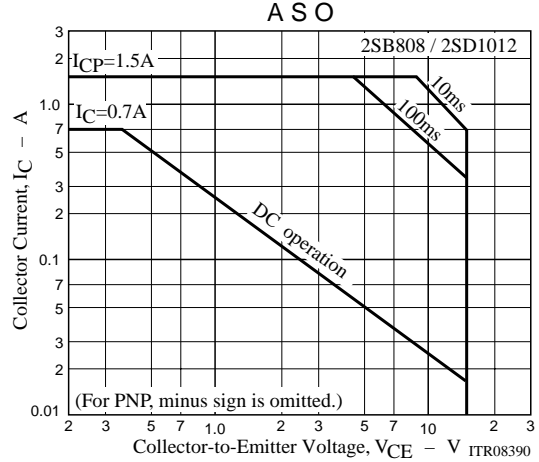
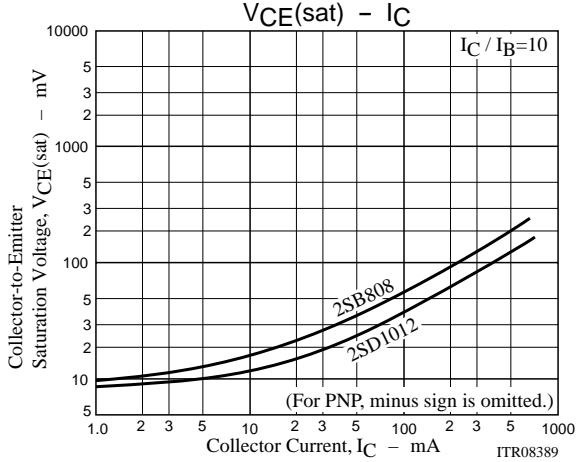
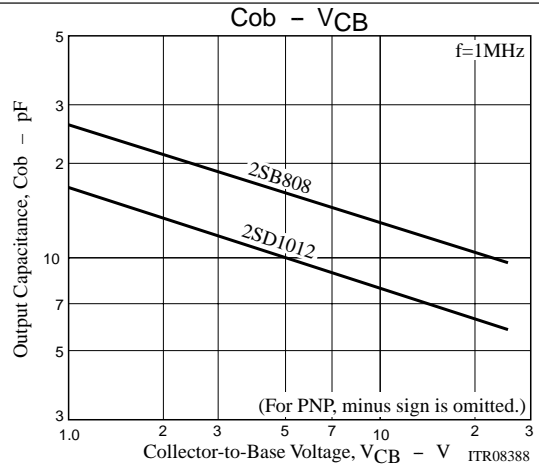
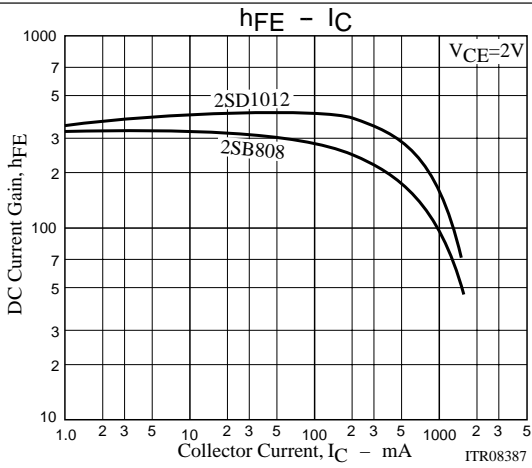
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)1}$	$I_C=(-)5mA, I_B=(-)0.5mA$		(-15)	(-35)	mV
	$V_{CE(sat)2}$	$I_C=(-)100mA, I_B=(-)10mA$		10	25	mV
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)100mA, I_B=(-)10mA$		(-0.8)	(-1.2)	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)10\mu A, I_E=0$	(-)20			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)1mA, R_{BE}=\infty$	(-)15			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=(-)10\mu A, I_C=0$	(-)5			V

* : The 2SB808/2SD1012 are classified by 50mA h_{FE} as follows :

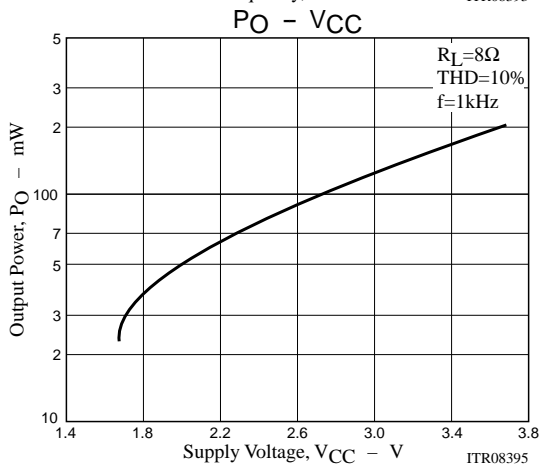
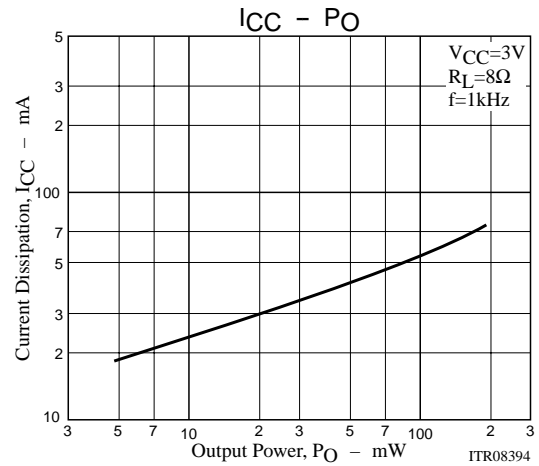
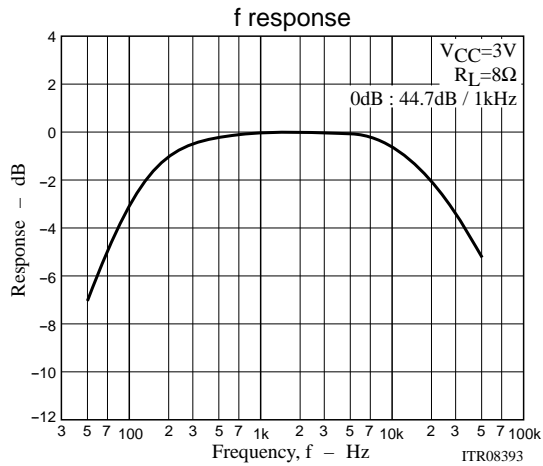
2SB808	Rank	F	G	
	h_{FE}	160 to 320	280 to 560	
2SD1012	Rank	F	G	H
	h_{FE}	160 to 320	280 to 560	480 to 960



2SB808/2SD1012



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