



High h_{FE} , AF Amplifier Applications

Applications

- AF amplifier, various drivers, muting circuit.

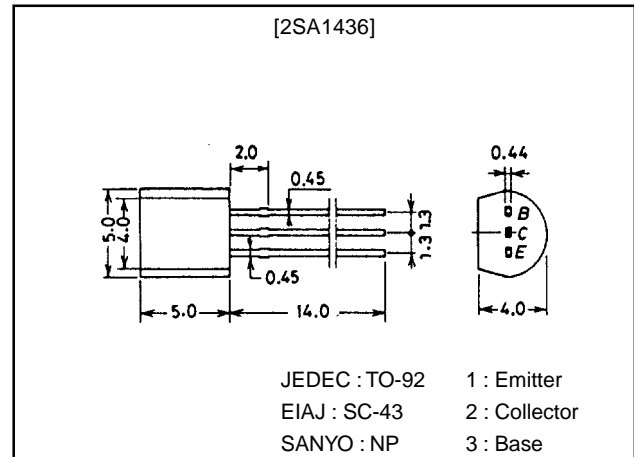
Features

- Adoption of MBIT process.
- High DC current gain ($h_{FE}=500$ to 1200).
- Large current capacity.
- Low collector-to-emitter saturation voltage ($V_{CE(sat)}=0.5V$ max).
- High V_{EBO} ($V_{EBO}\geq 15V$).

Package Dimensions

unit:mm

2003A



Specifications

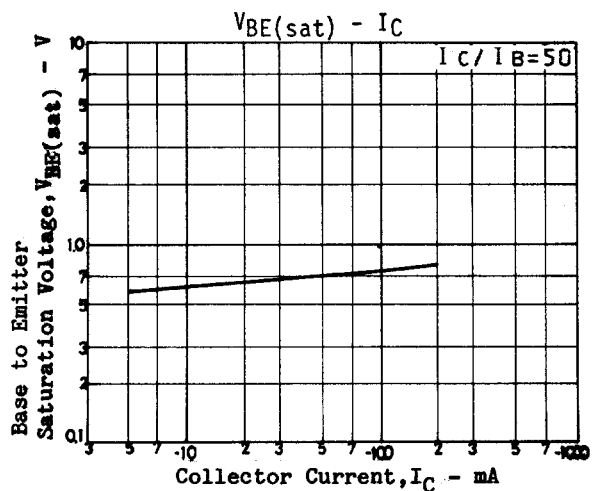
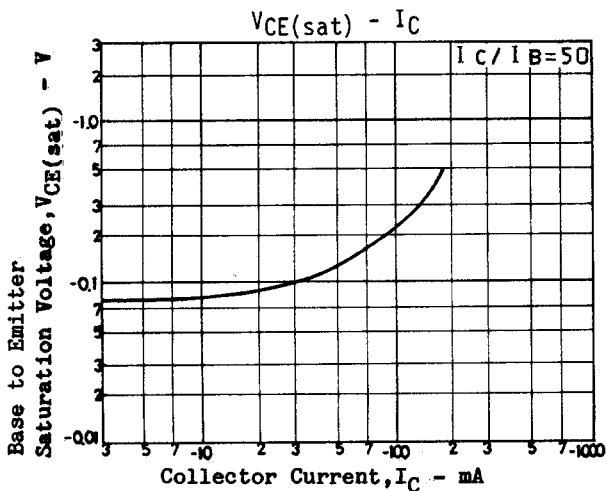
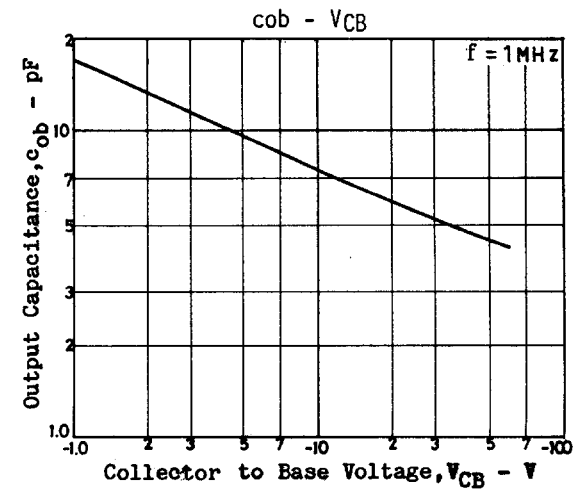
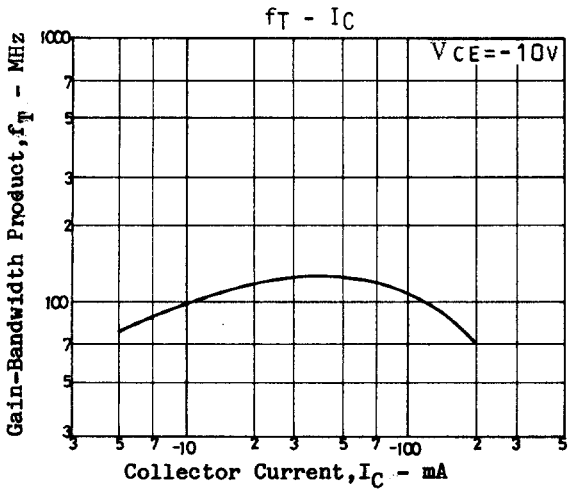
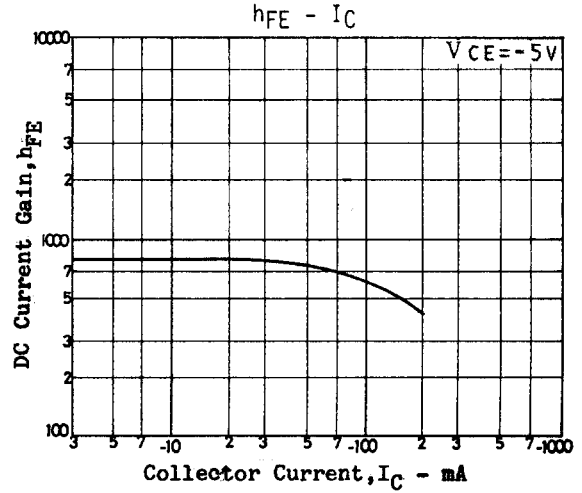
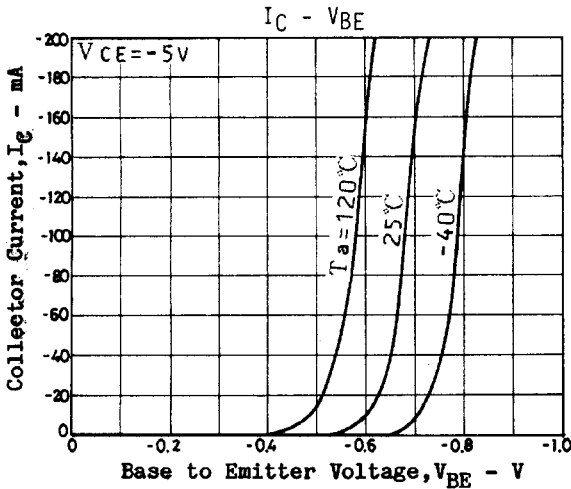
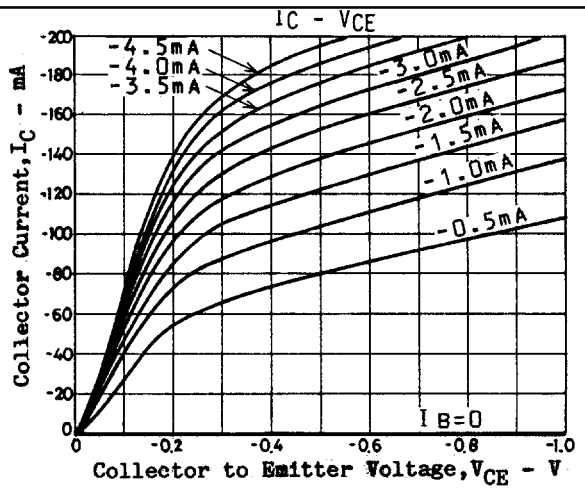
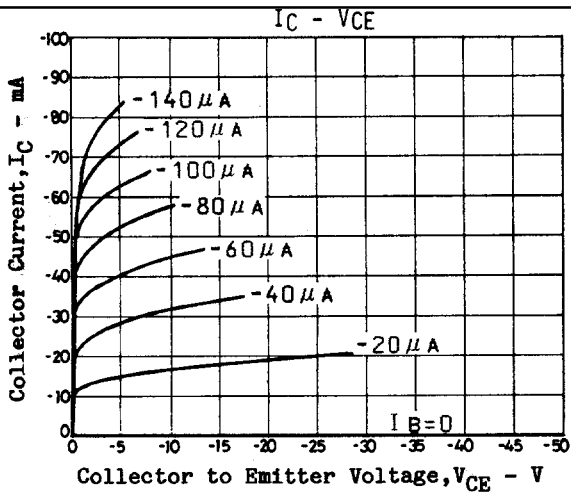
Absolute Maximum Ratings at $T_a = 25^\circ C$

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		-60	V
Collector-to-Emitter Voltage	V_{CEO}		-50	V
Emitter-to-Base Voltage	V_{EBO}		-15	V
Collector Current	I_C		-200	mA
Collector Current (Pulse)	I_{CP}		-300	mA
Collector Dissipation	P_C		600	mW
Junction Temperature	T_J		150	$^\circ C$
Storage Temperature	T_{stg}		-55 to +150	$^\circ C$

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

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=-40V, I_E=0$			-0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=-10V, I_C=0$			-0.1	μA
DC Current Gain	h_{FE1}	$V_{CE}=-5V, I_C=-10mA$	500	800	1200	
	h_{FE2}	$V_{CE}=-5V, I_C=-100mA$	200			
Gain-Bandwidth Product	f_T	$V_{CE}=-10V, I_C=-10mA$		100		MHz
Output Capacitance	C_{ob}	$V_{CB}=-10V, f=1MHz$		7.5		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-100mA, I_B=-2mA$		-0.2	-0.5	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-100mA, I_B=-2mA$		-0.75	-1.1	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=-10\mu A, I_E=0$	-60			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=-1mA, R_{BE}=\infty$	-50			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=-10\mu A, I_C=0$	-15			V

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