



High-h_{FE}, AF Amplifier Applications

Applications

- AF amplifier, various drivers, muting circuit.

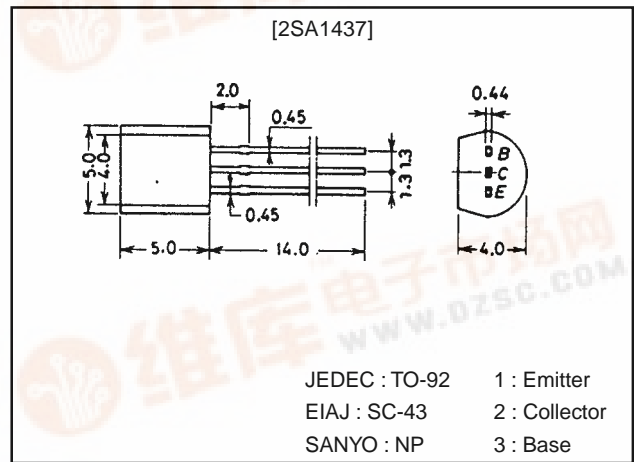
Features

- Very small-sized package permitting sets to be made smaller and slimer.
- Adoption of FBET process.
- High DC current gain : (h_{FE}=400 to 1000).
- High breakdown voltage : (V_{CEO}≥100V).
- Low collector-to-emitter saturation voltage : (V_{CE(sat)}≤0.5V).
- High V_{EBO} : (V_{EBO}≥15V).
- Small C_{ob} : (C_{ob}=4.0pF typ).

Package Dimensions

unit:mm

2003A



Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CBO}		-120	V
Collector-to-Emitter Voltage	V _{CEO}		-100	V
Emitter-to-Base Voltage	V _{EBO}		-15	V
Collector Current	I _C		-50	mA
Collector Current (Pulse)	I _{CP}		-100	mA
Collector Dissipation	P _C		500	mW
Junction Temperature	T _J		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

Electrical Characteristics at Ta = 25°C

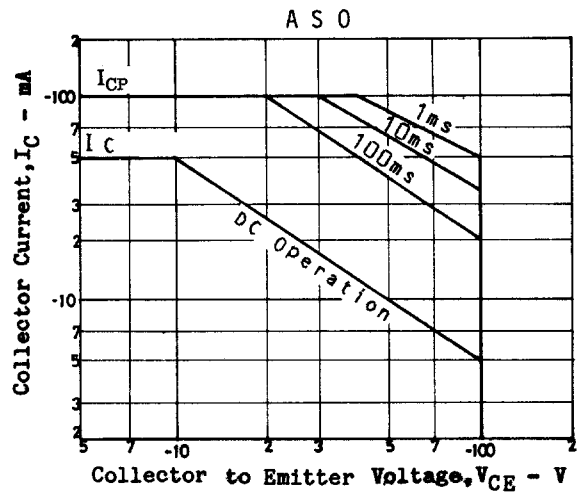
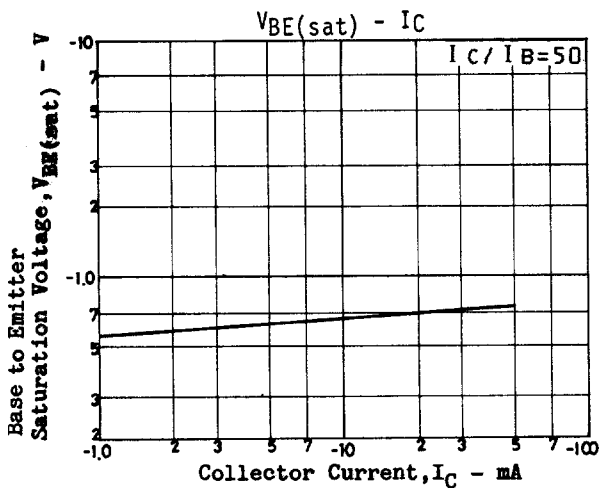
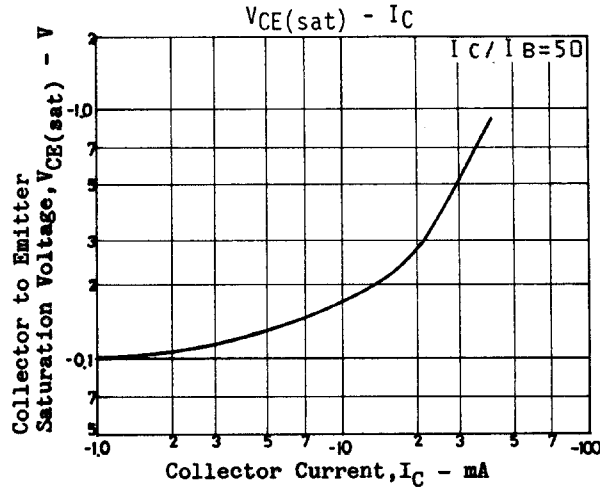
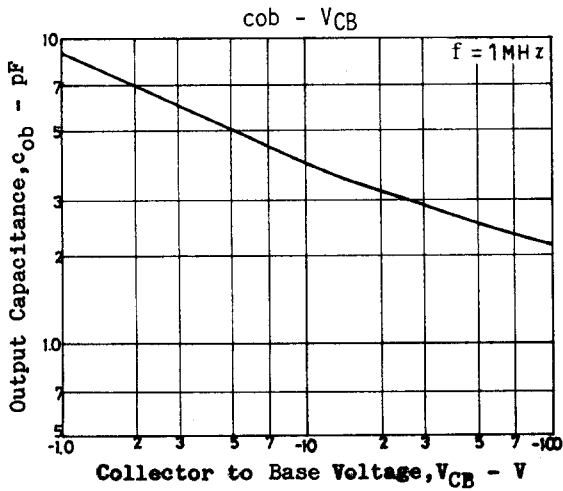
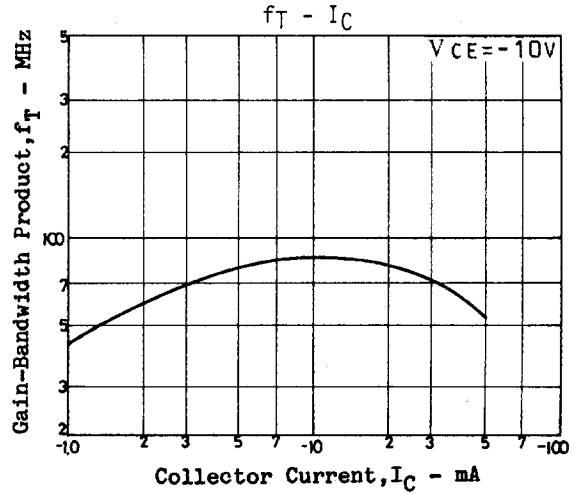
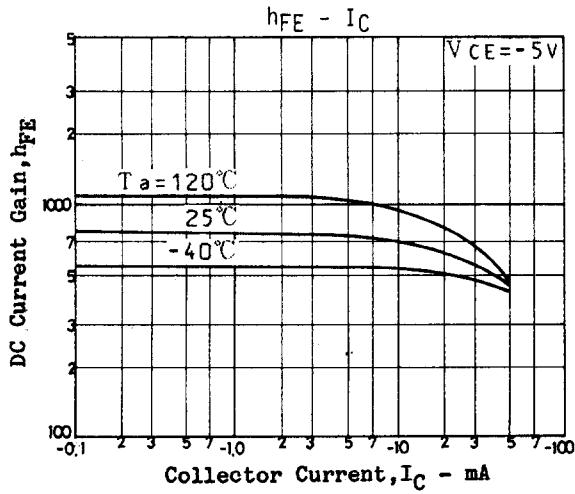
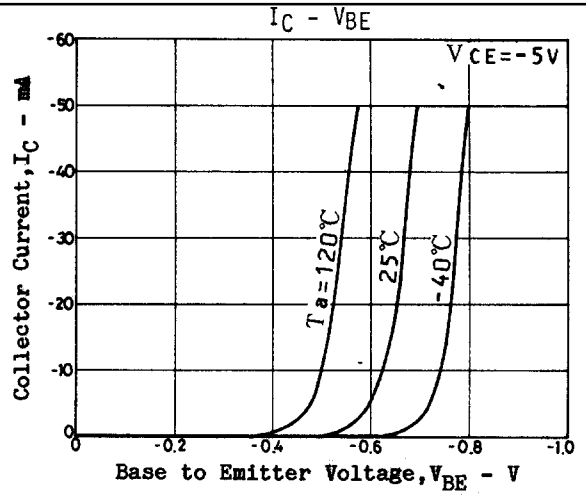
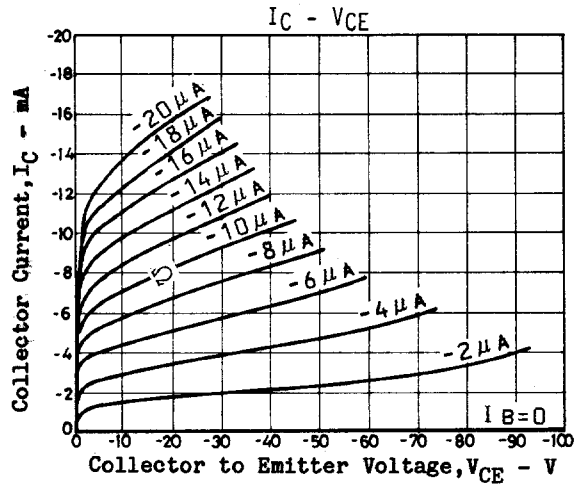
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I _{CBO}	V _{CB} =-80V, I _E =0			-0.1	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} =-10V, I _C =0			-0.1	μA
DC Current Gain	h _{FE}	V _{CE} =-5V, I _C =-10mA	400	700	1000	
Gain-Bandwidth Product	f _T	V _{CE} =-10V, I _C =-10mA		85		MHz
Output Capacitance	C _{ob}	V _{CB} =-10V, f=1MHz		4.0		pF
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =-10mA, I _B =-0.2mA		-0.18	-0.5	V
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C =-10mA, I _B =-0.2mA		-0.7	-1.0	V
Collector-to-Base Breakdown Voltage	V _{(BR)CBO}	I _C =-10μA, I _E =0	-120			V
Collector-to-Emitter Breakdown Voltage	V _{(BR)CEO}	I _C =-1mA, R _{BE} =∞	-100			V
Emitter-to-Base Breakdown Voltage	V _{(BR)EBO}	I _E =-10μA, I _C =0	-15			V

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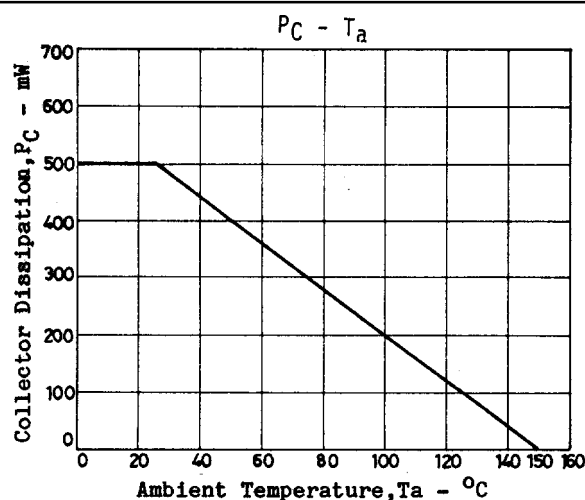
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