



Low-Frequency Driver Applications

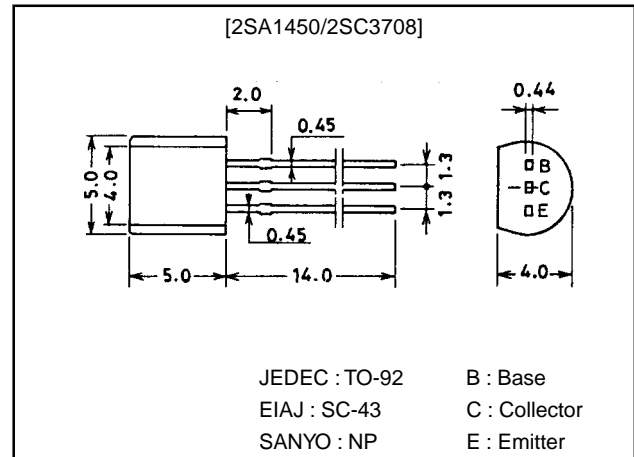
Features

- Adoption of FBET process.
- AF amp, AF power amp.
- High breakdown voltage : $V_{CEO} > 80V$

Package Dimensions

unit:mm

2003A



() : 2SA1450

Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		(-)100	V
Collector-to-Emitter Voltage	V_{CEO}		(-)80	V
Emitter-to-Base Voltage	V_{EBO}		(-)5	V
Collector Current	I_C		(-)500	mA
Collector Current (Pulse)	I_{CP}		(-)800	mA
Base Current	I_B		(-)100	mA
Collector Dissipation	P_C		600	mW
Junction Temperature	T_j		150	$^\circ C$
Storage Temperature	T_{stg}		-55 to +150	$^\circ C$

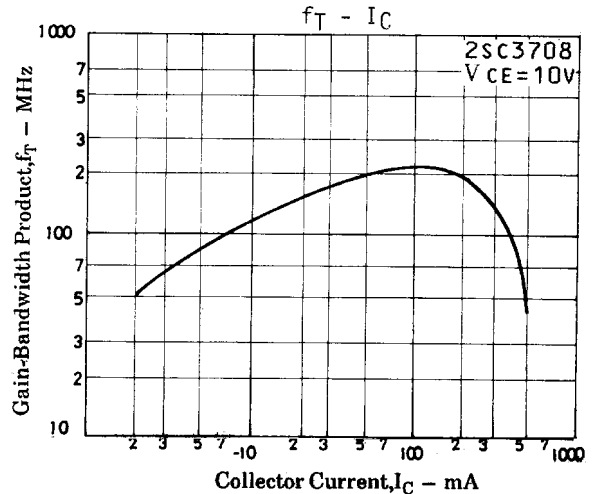
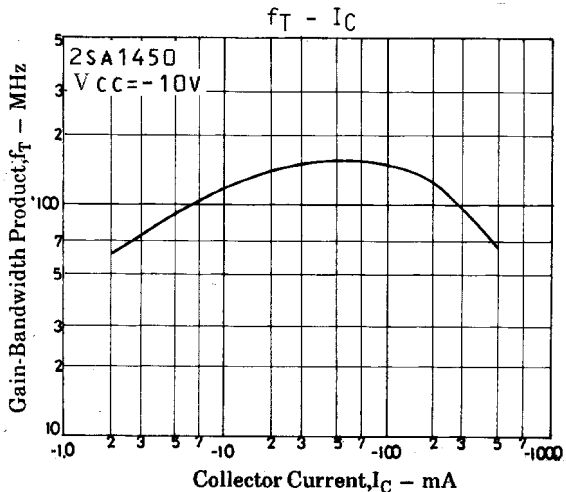
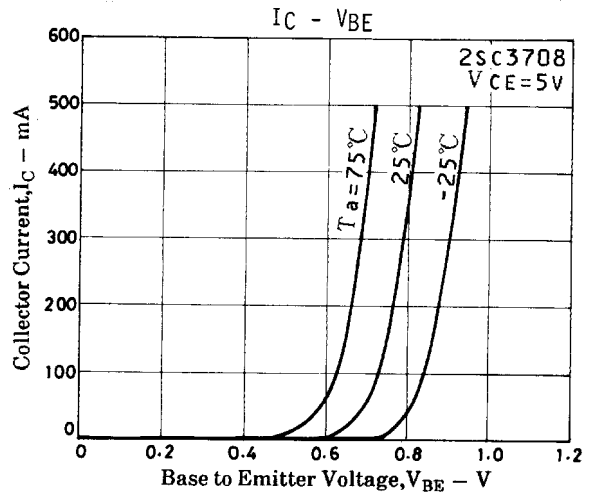
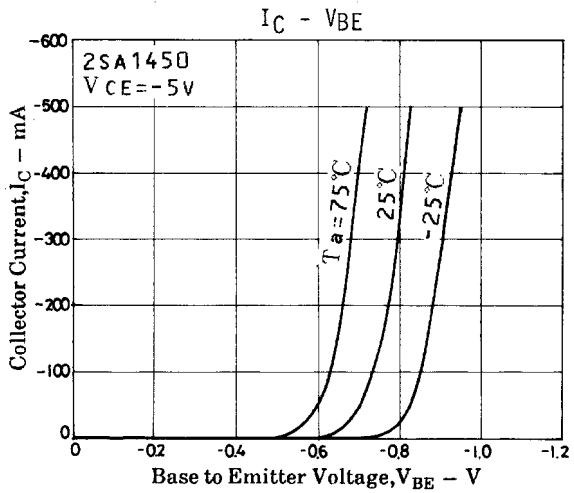
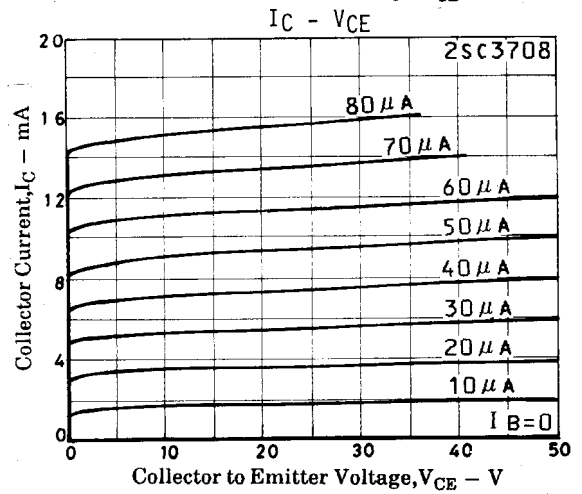
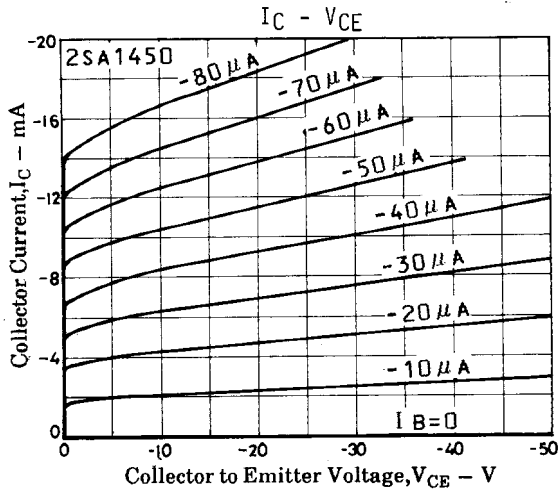
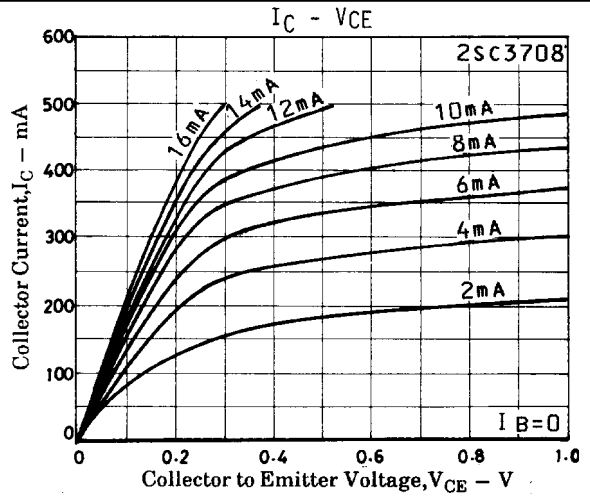
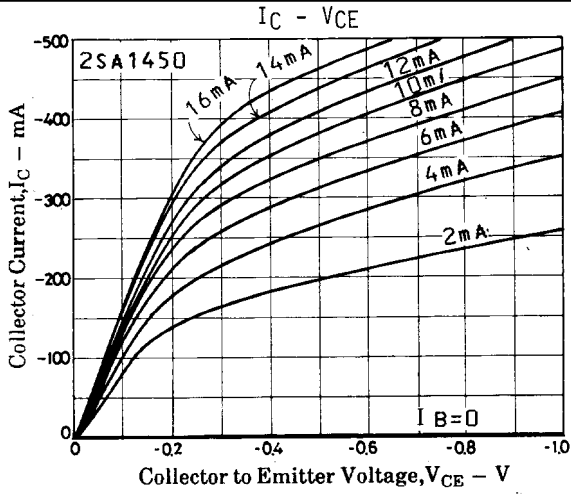
Electrical Characteristics at $T_a = 25^\circ C$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB} = (-)60V, I_E = 0$			(-)0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = (-)4V, I_C = 0$			(-)0.1	μA
DC Current Gain	h_{FE1}	$V_{CE} = (-)5V, I_C = (-)50mA$	100*		400*	
	h_{FE2}	$V_{CE} = (-)5V, I_C = (-)400mA$	60			
Gain-Bandwidth Product	f_T	$V_{CE} = (-)10V, I_C = (-)10mA$		120		MHz
Output Capacitance	C_{ob}	$V_{CB} = (-)10V, f = 1MHz$		(7)5		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)400mA, I_B = (-)40mA$		0.16		V
				(-0.2)	(-0.5)	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = (-)400mA, I_B = (-)40mA$		(-0.9)	(-1.2)	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)10\mu A, I_E = 0$	-100			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)1mA, R_{BE} = \infty$	-80			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = (-)10\mu A, I_C = 0$	-5			V

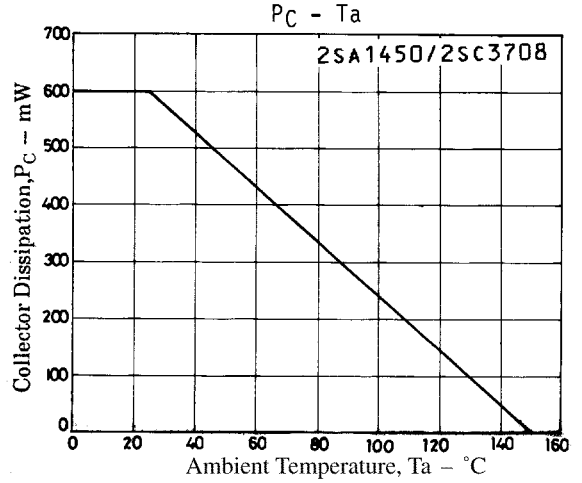
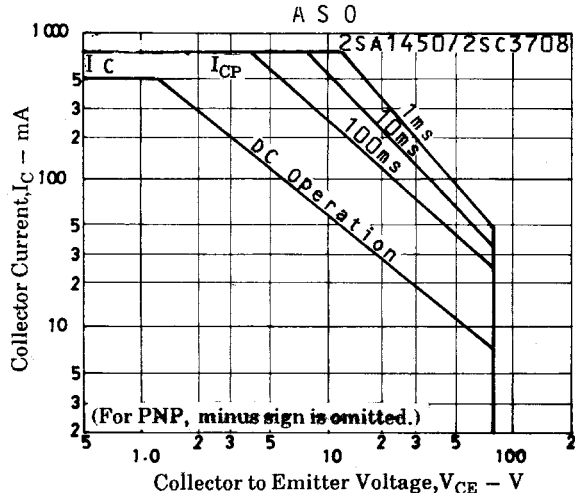
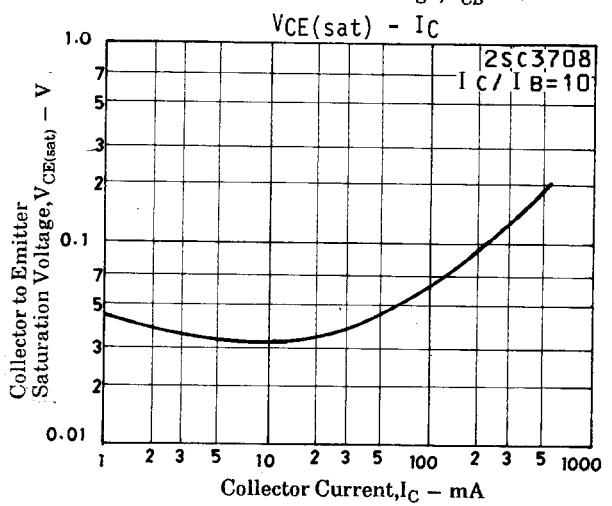
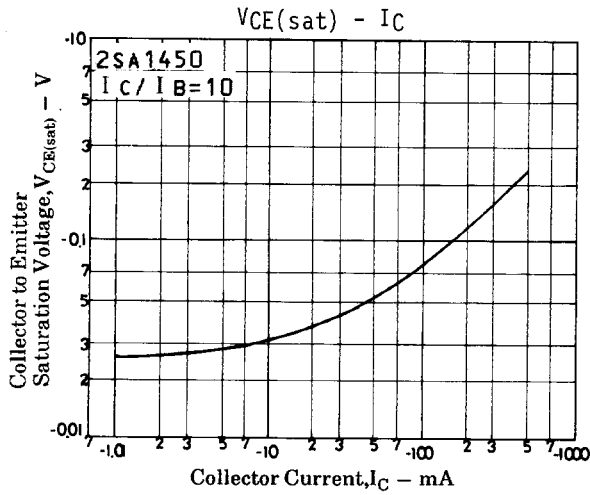
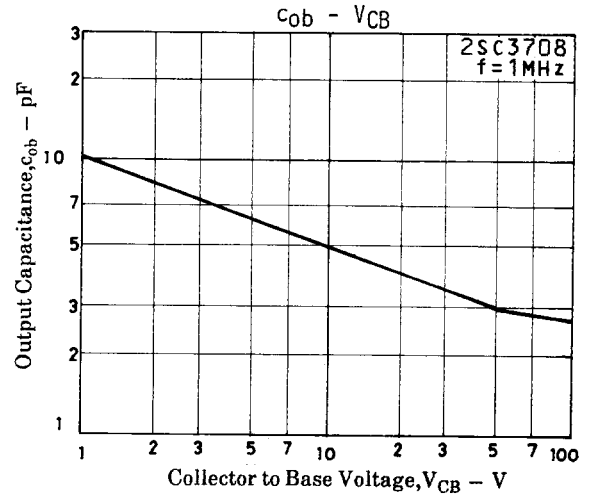
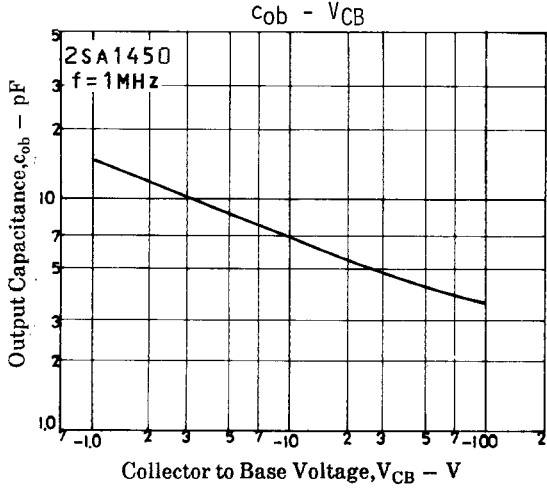
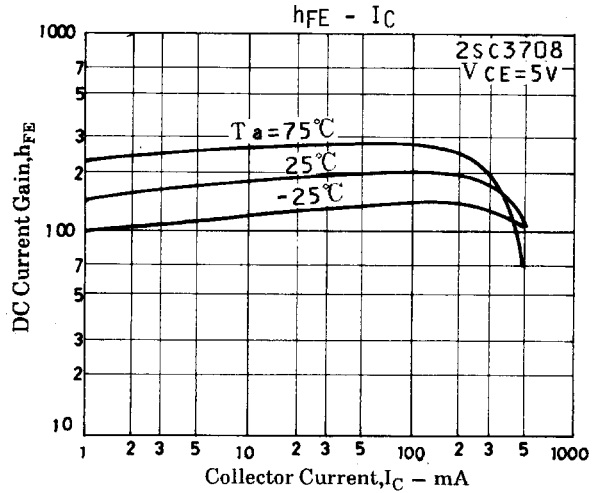
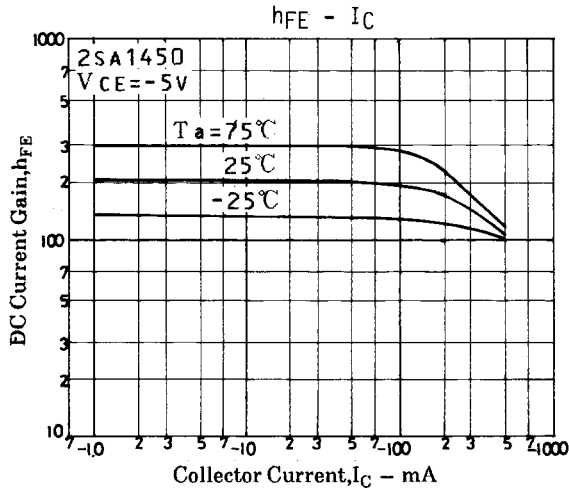
* : 2SA1450/2SC3708 are classified by 50mA h_{FE} as follows :

100	R	200	140	S	280	200	T	400
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2SA1450/2SC3708



2SA1450/2SC3708



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