

SANYO	No.2555A	2SB1302
	PNP Epitaxial Planar Silicon Transistor High-Current Switching Applications	

Applications

- . DC-DC converters, motor drivers, relay drivers, lamp drivers

Features

- . Adoption of FBET, MBIT processes
- . Low collector to emitter saturation voltage
- . Large current capacity
- . Fast switching speed
- . Very small size making it easy to provide high-density, small-sized hybrid ICs

Absolute Maximum Ratings at Ta=25°C

			unit
Collector to Base Voltage	V_{CB0}	-25	V
Collector to Emitter Voltage	V_{CE0}	-20	V
Emitter to Base Voltage	V_{EB0}	-5	V
Collector Current	I_C	-5	A
Collector Current(Pulse)	I_{CP}	-8	A
Collector Dissipation	P_C	1.3	W
		Mounted on ceramic board (250mm ² x 0.8mm)	
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55 to +150	°C

Electrical Characteristics at Ta=25°C

			min	typ	max	unit
Collector Cutoff Current	I_{CB0}	$V_{CB}=-20V, I_E=0$			-500	nA
Emitter Cutoff Current	I_{EB0}	$V_{EB}=-4V, I_C=0$			-500	nA
DC Current Gain	$h_{FE}(1)$	$V_{CE}=-2V, I_C=-500mA$	100*		400*	
	$h_{FE}(2)$	$V_{CE}=-2V, I_C=-4A$	60			
Gain-Bandwidth Product	f_T	$V_{CE}=-5V, I_C=-200mA$		320		MHz
Output Capacitance	c_{ob}	$V_{CB}=-10V, f=1MHz$		60		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=-3A, I_B=-60mA$	-250	-500		mV
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=-3A, I_B=-60mA$	-1.0	-1.3		V

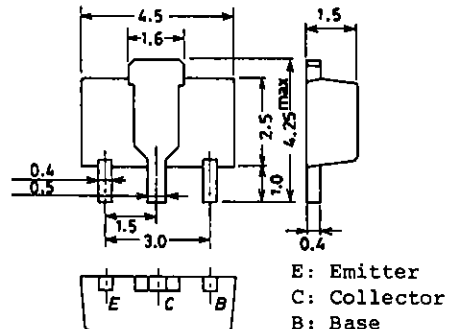
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*: The 2SB1302 is classified by 500mA h_{FE} as follows:

100	R	200	140	S	280	200	T	400
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Marking : BJ
 h_{FE} rank : R,S,T

Package Dimensions 2038
(unit:mm)



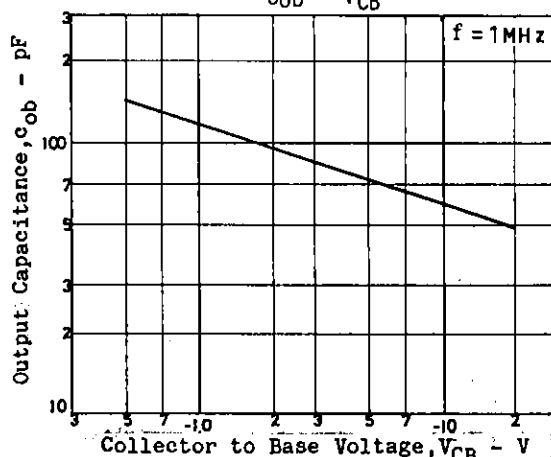
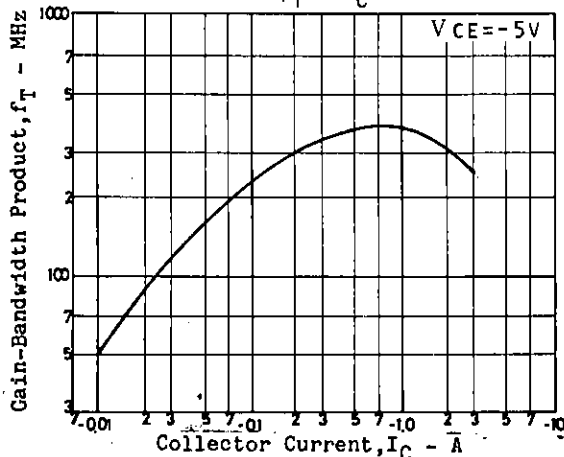
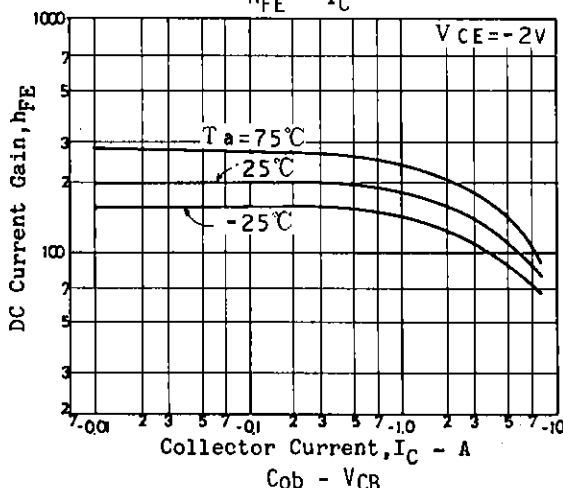
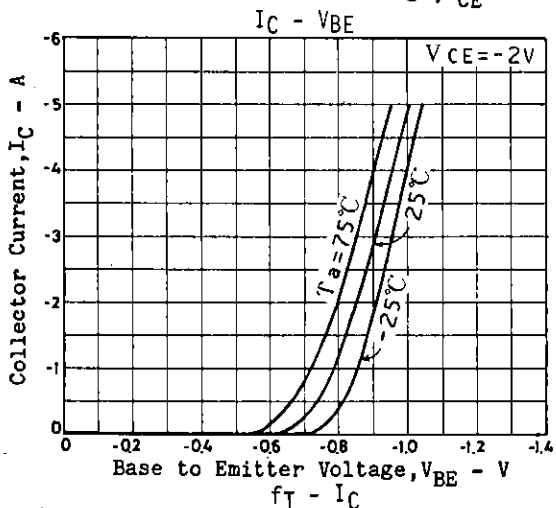
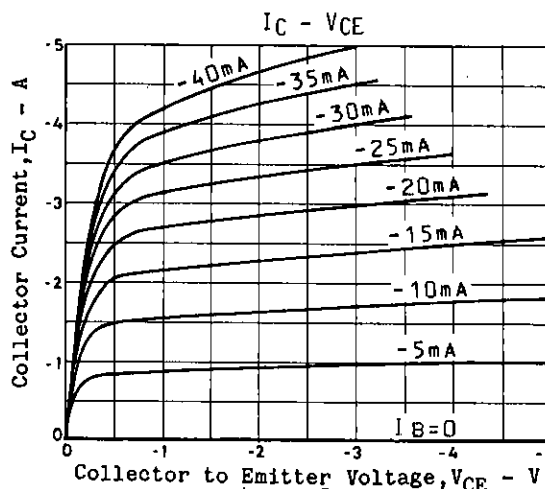
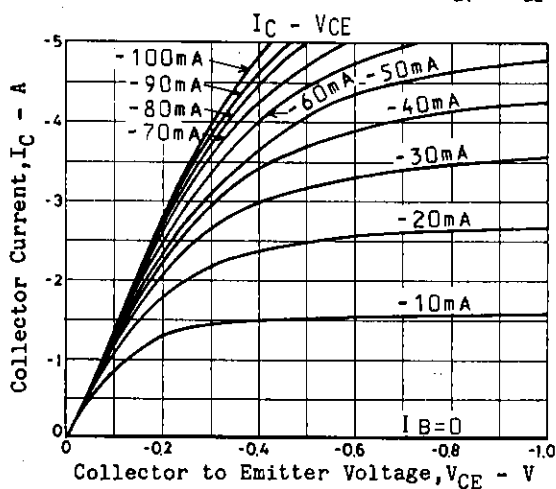
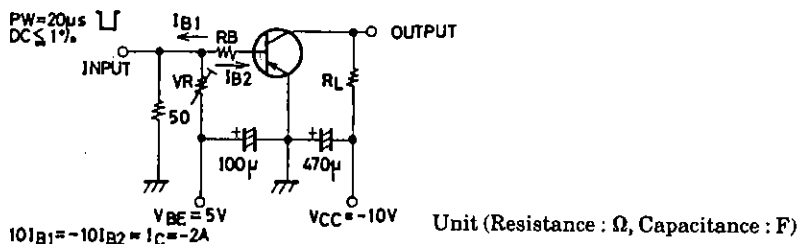
E: Emitter
 C: Collector
 B: Base

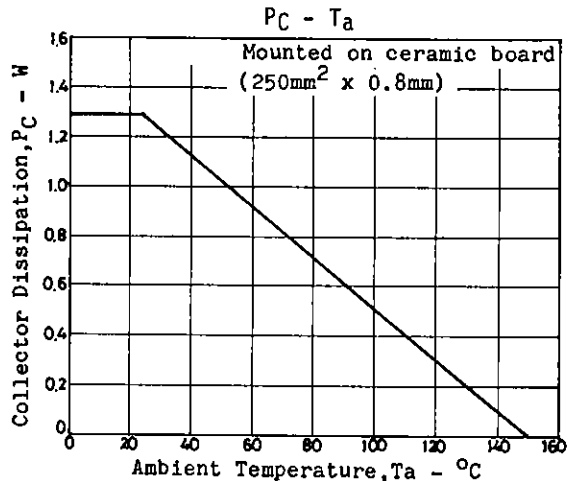
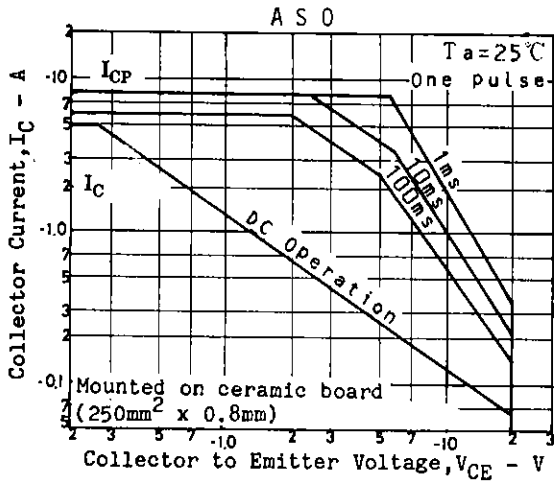
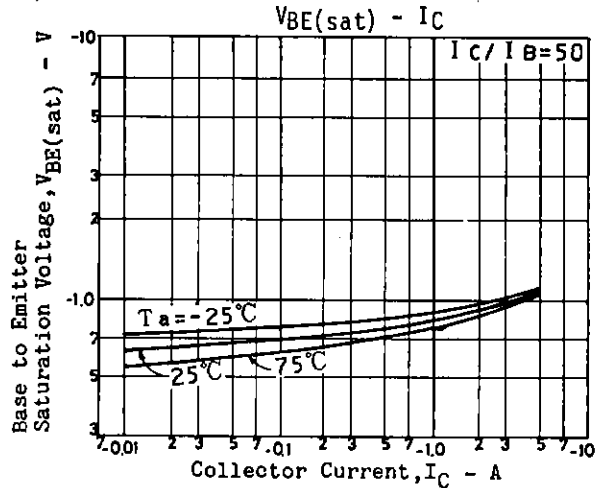
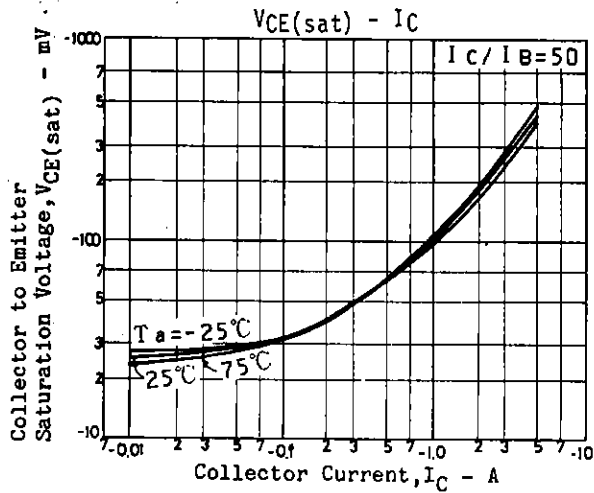
SANYO: PCP
 (Bottom View)

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			min	typ	max	unit
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -10\mu A, I_E = 0$	-25			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1mA, R_{BE} = \infty$	-20			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -10\mu A, I_C = 0$	-5			V
Turn-on Time	t_{on}	See specified Test Circuit.		40		ns
Storage Time	t_{stg}	"		200		ns
Fall Time	t_f	"		10		ns

Switching Time Test Circuit





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