

SANYO	No.2101B	2SA1507/2SC3902
		PNP/NPN Epitaxial Planar Silicon Transistors
160V/1.5A Switching Applications		

Applications

- Color TV audio output, converters, inverters.

Features

- High breakdown voltage.
- Large current capacity.
- Adoption of FBET and MBIT process.
- The plastic-covered heat sink eliminates the need for an insulator when mounting the 2SA1507/2SC3902.

(): 2SA1507

Absolute Maximum Ratings at Ta = 25°C

			unit
Collector-to-Base Voltage	V _{CB0}	(-)180	V
Collector-to-Emitter Voltage	V _{CE0}	(-)160	V
Emitter-to-Base Voltage	V _{EB0}	(-)6	V
Collector Current	I _C	(-)1.5	A
Collector Current (Pulse)	I _{CP}	(-)2.5	A
Collector Dissipation	P _C	1.5	W
		10	W
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55 to +150	°C

T_c = 25°C

Electrical Characteristics at Ta = 25°C

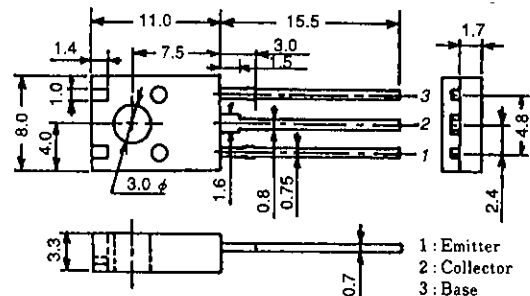
			min	typ	max	unit
Collector Cutoff Current	I _{CBO}	V _{CB} = (-)120V, I _E = 0			(-)1.0	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} = (-)4V, I _C = 0			(-)1.0	μA
DC Current Gain	h _{FE} (1)	V _{CE} = (-)5V, I _C = (-)100mA	100※		400※	
	h _{FE} (2)	V _{CE} = (-)5V, I _C = (-)10mA	90			
Gain-Bandwidth Product	f _T	V _{CE} = (-)10V, I _C = (-)50mA		120		MHz
Output Capacitance	C _{ob}	V _{CB} = (-)10V, f = 1MHz		(22)		pF
				14		pF
C-E Saturation Voltage	V _{CE(sat)}	I _C = (-)500mA, I _B = (-)50mA		(-0.2)	(-0.5)	V
				0.13	0.45	V
B-E Saturation Voltage	V _{BE(sat)}	I _C = (-)500mA, I _B = (-)50mA		(-)0.85	(-)1.2	V

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※ : The 2SA1507/2SC3902 are classified by 100mA h_{FE} as follows :

100	R	200	140	S	280	200	T	400
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Package Dimensions 2042B
(unit : mm)



SANYO: TO126ML

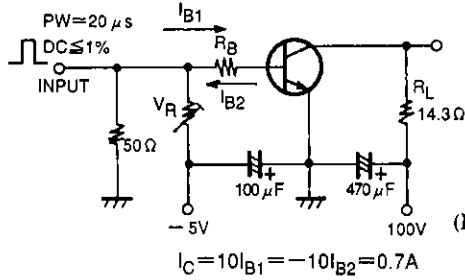
SANYO Electric Co., Ltd. Semiconductor Business Headquarters

TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN

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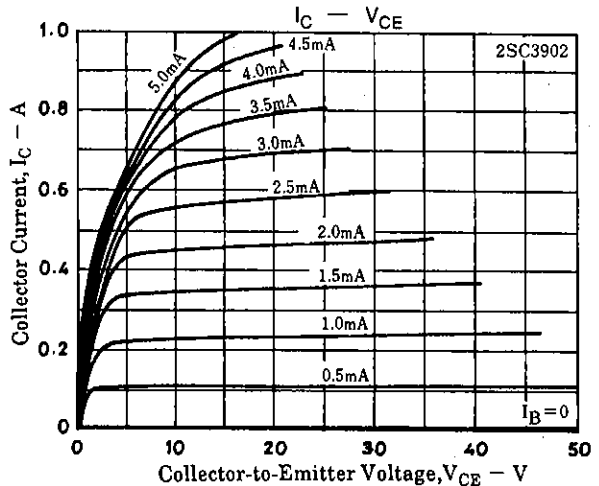
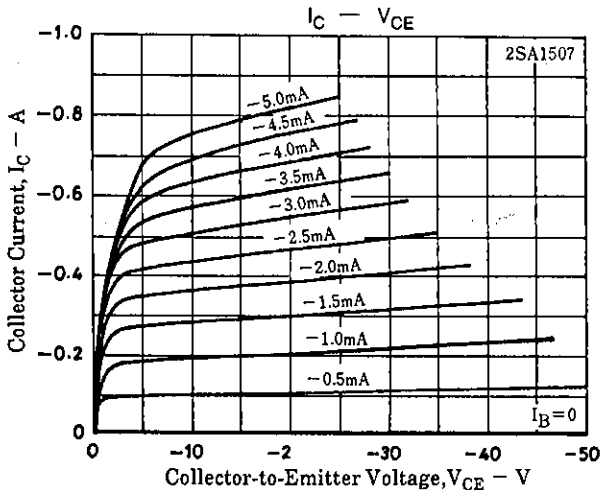
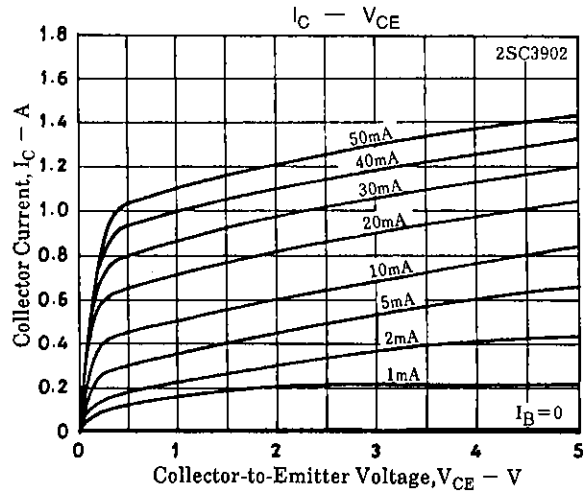
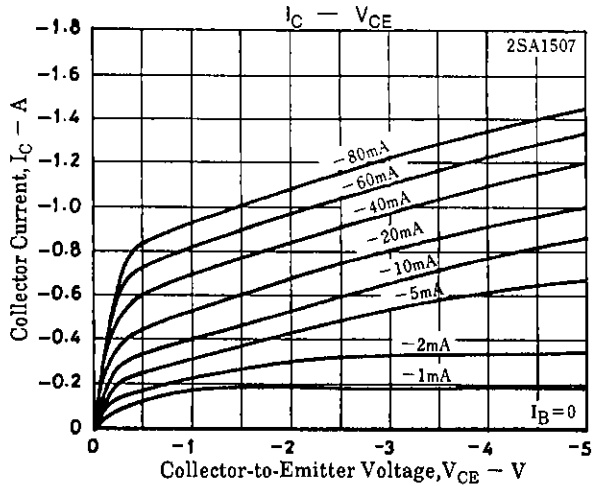
		min	typ	max	unit
C-B Breakdown Voltage	$V_{(BR)CBO}$ $I_C = (-)10\mu A, I_E = 0$	(-)180			V
C-E Breakdown Voltage	$V_{(BR)CEO}$ $I_C = (-)1mA, R_{BE} = \infty$	(-)160			V
E-B Breakdown Voltage	$V_{(BR)EBO}$ $I_E = (-)10\mu A, I_C = 0$	(-)6			V
Turn-ON Time	t_{on} See specified Test Circuit.		0.04		μs
Storage Time	t_{stg} //		(0.7)		μs
			1.2		μs
Fall Time	t_f //		(0.04)		μs
			0.08		μs

Switching Time Test Circuit

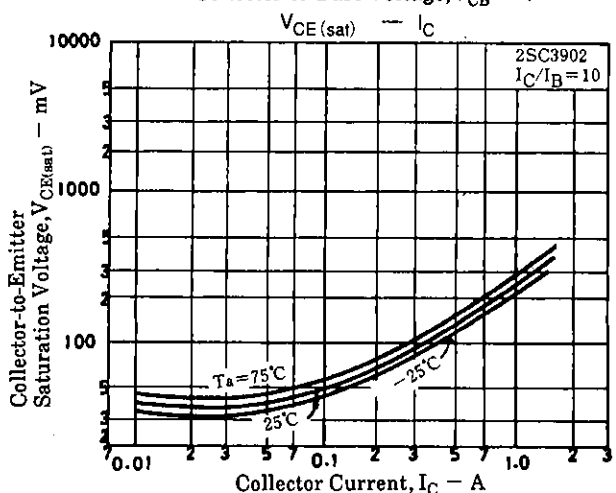
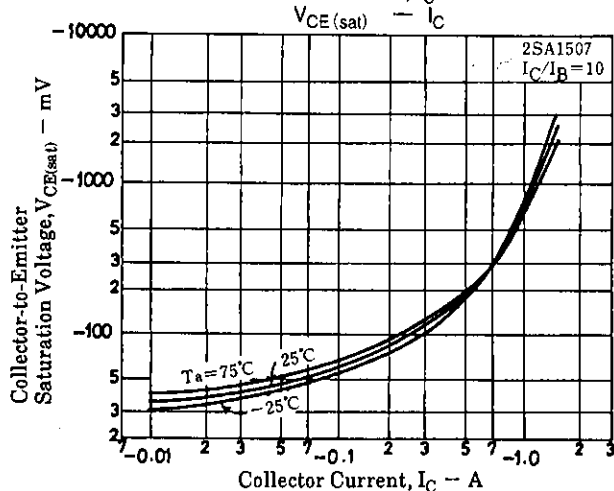
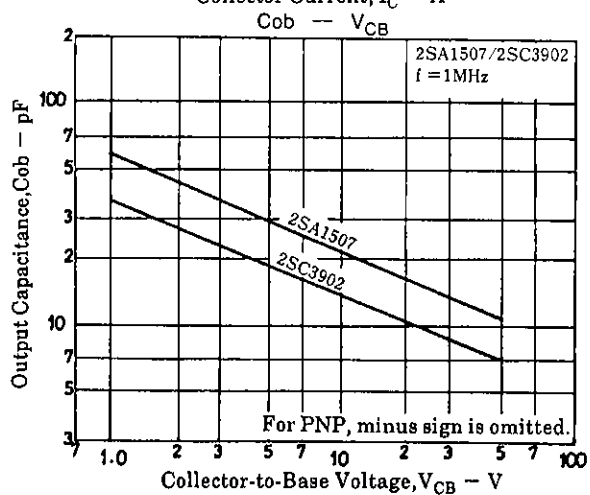
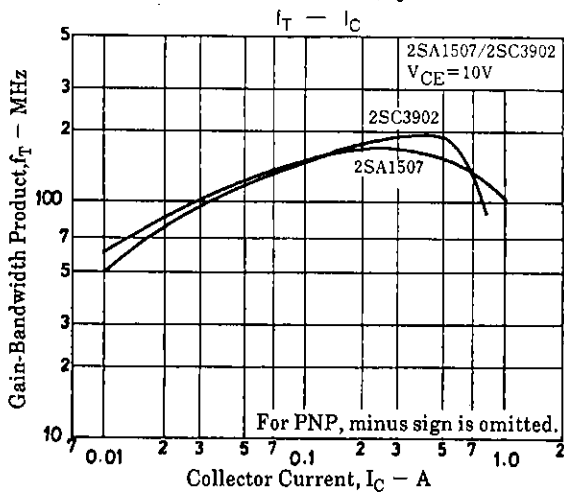
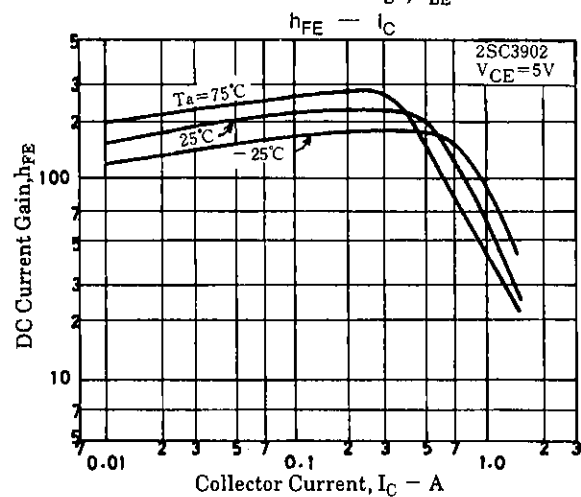
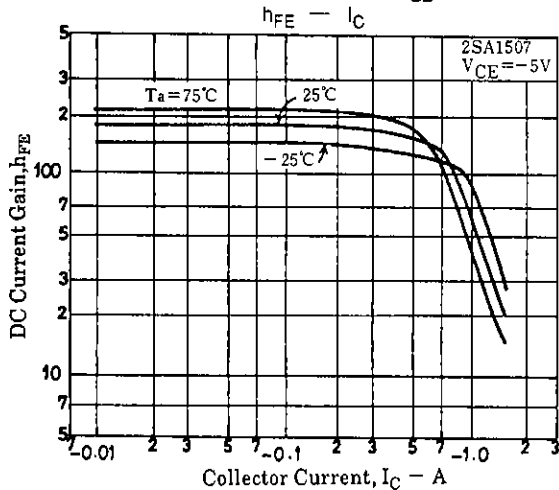
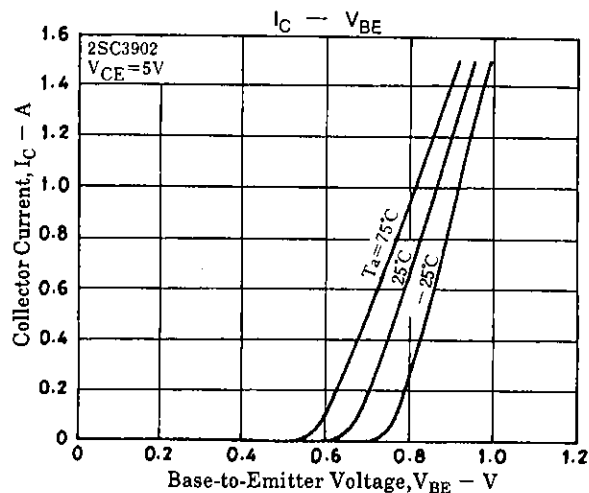
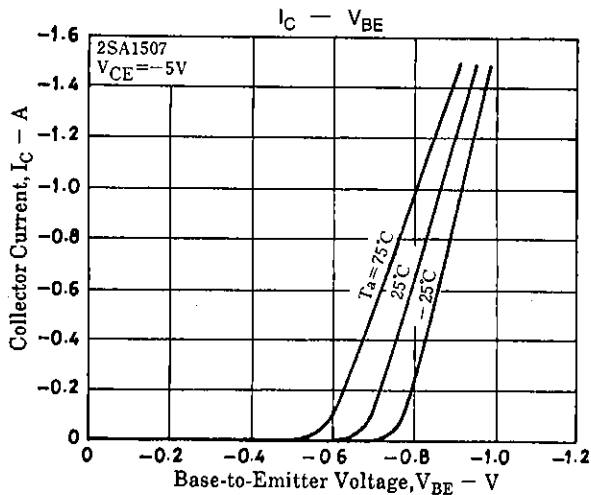


(For PNP, the polarity is reversed.)

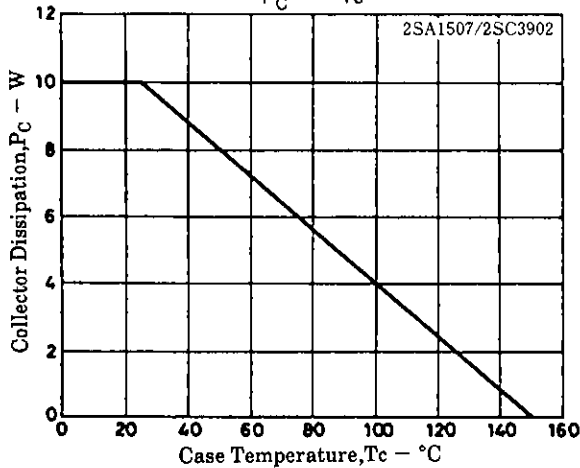
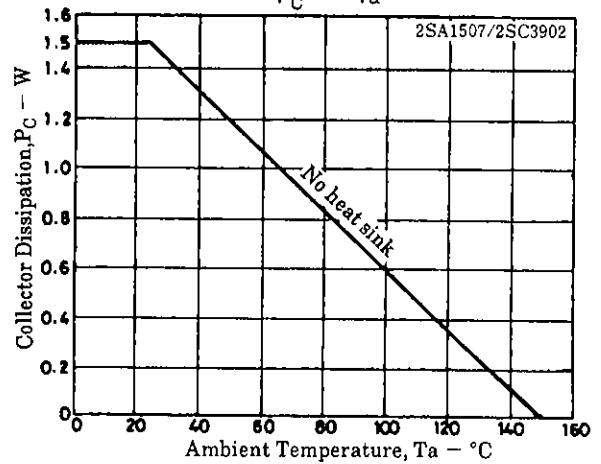
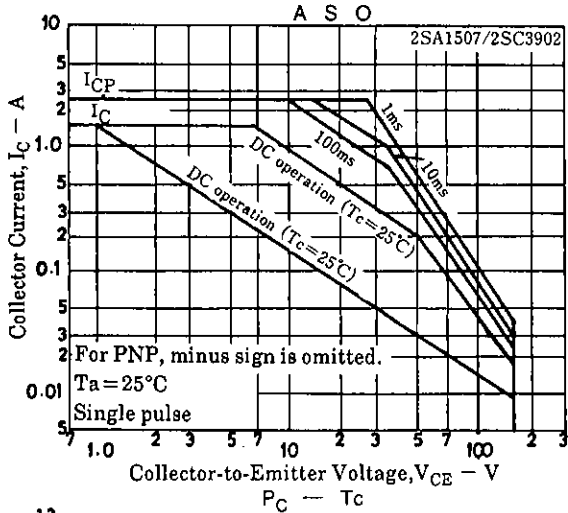
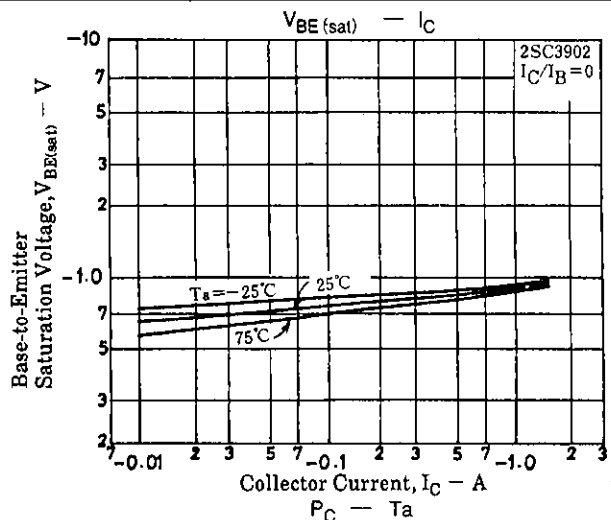
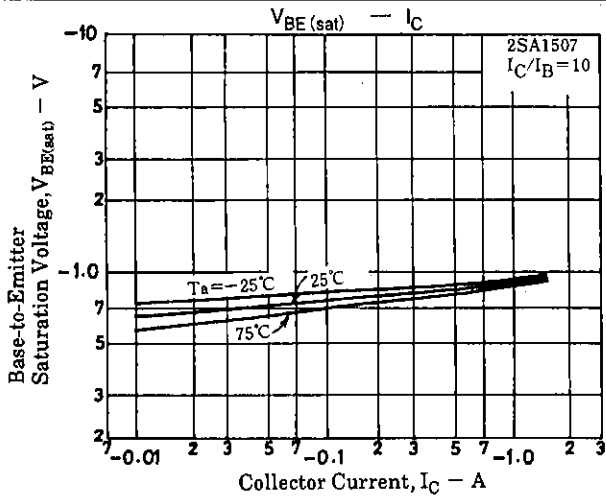
Unit (Resistance : Ω , Capacitance : F)



2SA1507/2SC3902



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