

SANYO	No.2958	2SC4390
	NPN Epitaxial Planar Silicon Transistor	
High- h_{FE} , AF Amp Applications		

Features

- Adoption of MBIT process
- High DC current gain ($h_{FE} = 800$ to 3200)
- Large current capacity ($I_C = 2A$)
- Low collector to emitter saturation voltage ($V_{CE(sat)} \leq 0.3V$)
- High V_{EBO} ($V_{EBO} \geq 15V$)

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

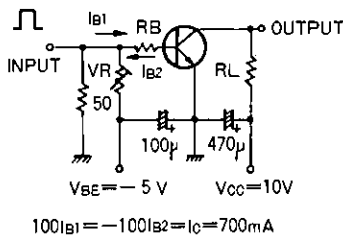
			unit
Collector to Base Voltage	V_{CBO}	20	V
Collector to Emitter Voltage	V_{CEO}	10	V
Emitter to Base Voltage	V_{EBO}	15	V
Collector Current	I_C	2	A
Collector Current(Pulse)	I_{CP}	4	A
Base Current	I_B	0.4	A
Collector Dissipation	P_C	500	mW
	Mounted on ceramic board ($250mm^2 \times 0.8mm$)	1.3	W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature	T_{stg}	-55 to +150	$^\circ C$

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

		min	typ	max	unit
Collector Cutoff Current	I_{CBO} $V_{CB} = 15V, I_E = 0$			0.1	μA
Emitter Cutoff Current	I_{EBO} $V_{EB} = 10V, I_C = 0$			0.1	μA
DC Current Gain	$h_{FE}(1)$ $V_{CE} = 2V, I_C = 500mA$	800	1500	3200	
	$h_{FE}(2)$ $V_{CE} = 2V, I_C = 2A$	400			
Gain-Bandwidth Product	f_T $V_{CE} = 10V, I_C = 50mA$		260		MHz
Output Capacitance	c_{ob} $V_{CB} = 10V, f = 1MHz$		28		pF
C-E Saturation Voltage	$V_{CE(sat)}$ $I_C = 1A, I_B = 20mA$	0.11		0.5	V
B-E Saturation Voltage	$V_{BE(sat)}$ $I_C = 1A, I_B = 20mA$	0.87		1.2	V
C-B Breakdown Voltage	$V_{(BR)CBO}$ $I_C = 10\mu A, I_E = 0$	20			V
C-E Breakdown Voltage	$V_{(BR)CEO}$ $I_C = 1mA, R_{BE} = \infty$	10			V
E-B Breakdown Voltage	$V_{(BR)EBO}$ $I_E = 10\mu A, I_C = 0$	15			V
Turn-on Time	t_{on} See specified Test Circuit.		0.13		μs
Storage Time	t_{stg} "		0.8		μs
Fall Time	t_f "		0.1		μs

Switching Time Test Circuit

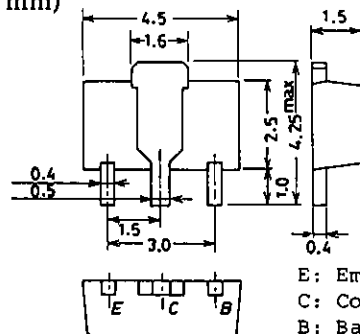
PW = 20 μs
DC $\leq 1\%$



Unit (Resistance : Ω , Capacitance : F)

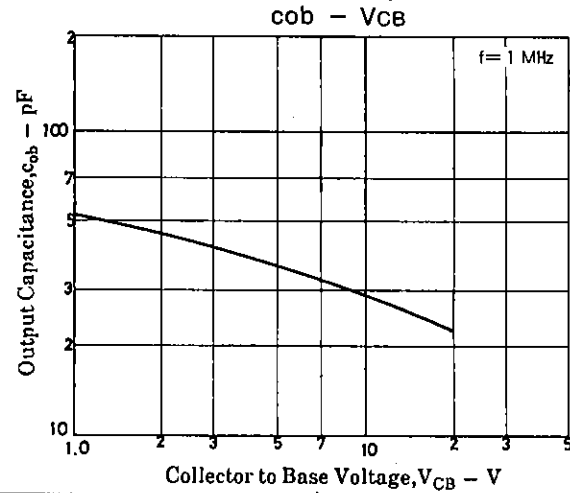
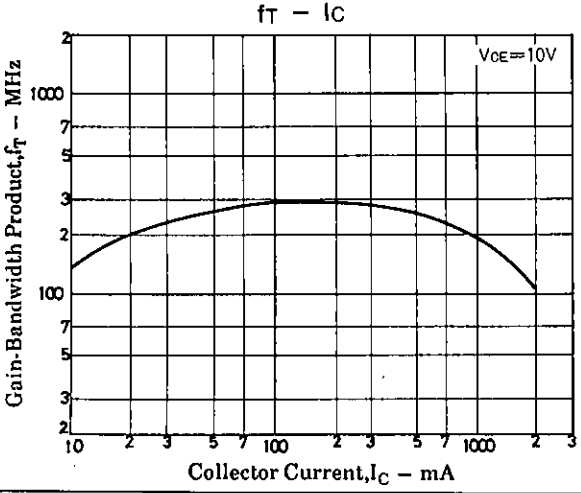
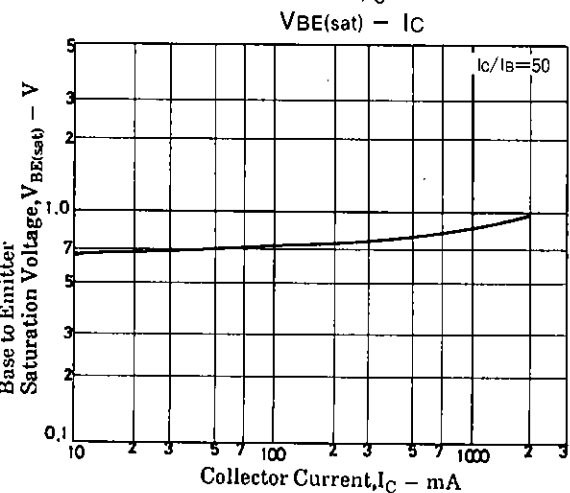
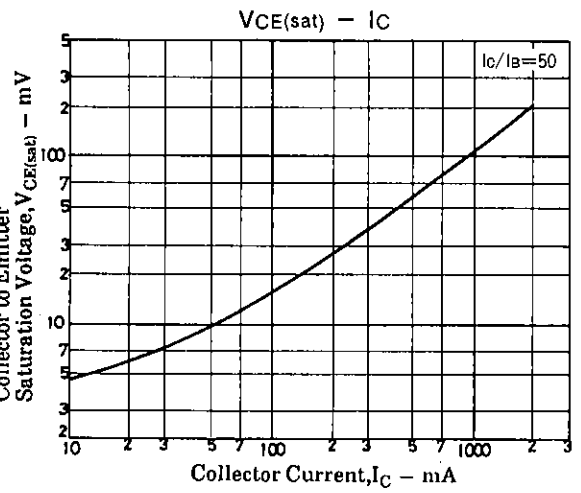
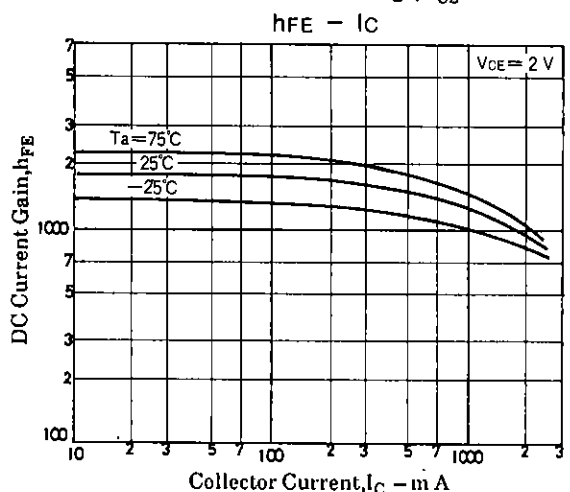
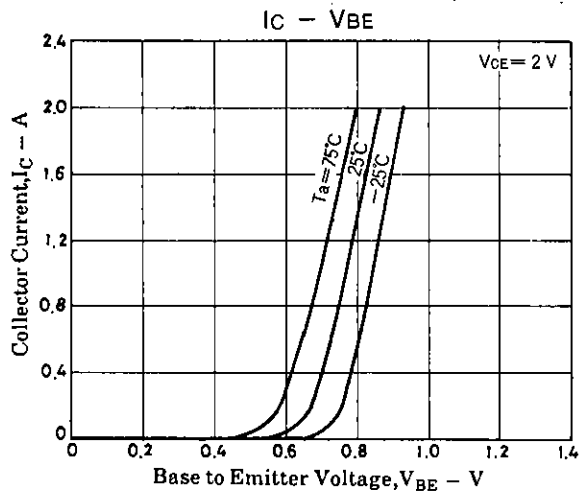
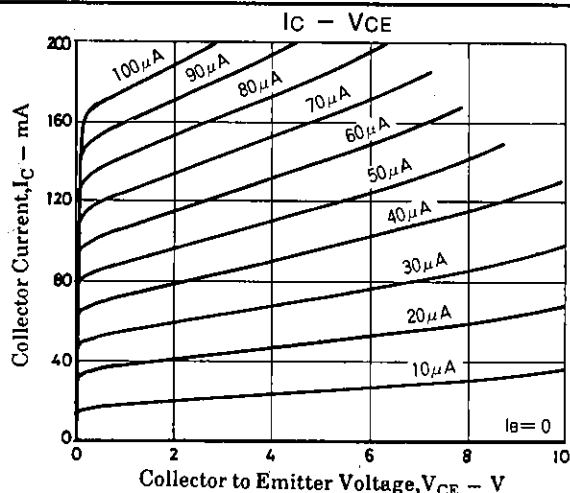
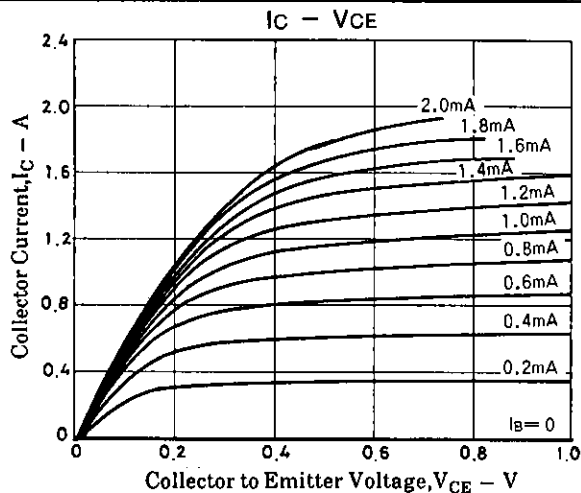
Package Dimensions 2038

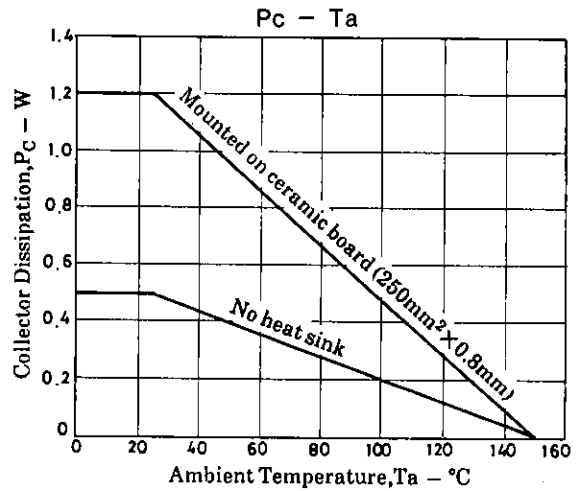
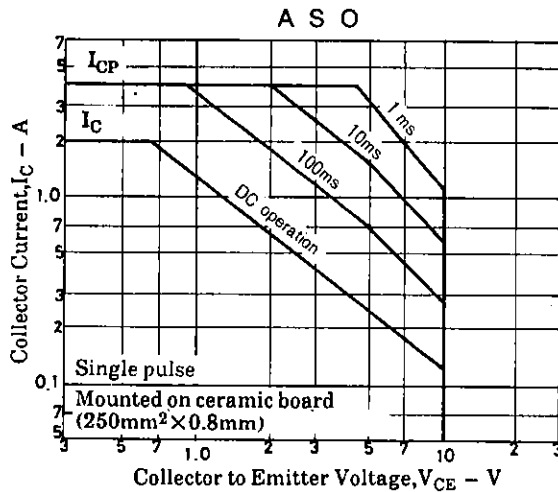
(unit : mm)



E: Emitter
C: Collector
B: Base

SANYO: PCP
(Bottom View)





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