

SANYO	No.1392A	2SA1339/2SC3393
PNP/NPN Epitaxial Planar Silicon Transistors		
High-Speed Switching Applications		

Features

- Very small-sized package permitting sets to be small-sized, slim
- High breakdown voltage: $V_{CEO}(-)50V$
- Complementary pair transistor having large current capacity and high f_T
- Adoption of FBET process

(): 2SA1339

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

			unit
Collector to Base Voltage	V_{CBO}	(-)60	V
Collector to Emitter Voltage	V_{CEO}	(-)50	V
Emitter to Base Voltage	V_{EBO}	(-)5	V
Collector Current	I_C	(-)500	mA
Collector Current(Pulse)	I_{CP}	(-)800	mA
Collector Dissipation	P_C	300	mW
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature	T_{stg}	-55 to +150	$^\circ C$

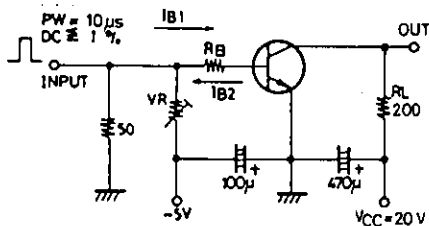
Electrical Characteristics at $T_a=25^\circ C$

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB}(-)40V, I_E=0$			(-)0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}(-)4V$			(-)0.1	μA
DC Current Gain	h_{FE}	$V_{CE}(-)5V, I_C(-)10mA$	100*		560*	
Gain Bandwidth Product	f_T	$V_{CE}(-)10V, I_C(-)50mA$		300		MHz
				(200)		
Output Capacitance	c_{ob}	$V_{CB}(-)10V, f=1MHz$		3.7		pF
				(5.6)		
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C(-)100mA, I_B(-)10mA$		0.1	0.3	V
				(0.15)	(0.4)	
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C(-)100mA, I_B(-)10mA$		0.8	1.2	V
C-B Breakdown Voltage	$V(BR)_{CBO}$	$I_C(-)10\mu A, I_E=0$	(-)60			V
C-E Breakdown Voltage	$V(BR)_{CEO}$	$I_C(-)100\mu A, R_{BE}=\infty$	(-)50			V
E-B Breakdown Voltage	$V(BR)_{EBO}$	$I_E(-)10\mu A, I_C=\infty$	(-)5			V
Rise Time	t_{on}	$\left[\begin{array}{l} V_{CC}=20V \\ I_C=10I_{B1}=-10I_{B2}=100mA \end{array} \right]$		70 (70)		ns
Storage Time	t_{stg}			400 (400)		ns
Fall Time	t_f			70 (50)		ns

* : The 2SA1339/2SC3393 are classified by 10mA h_{FE} as follows:

100 R	200	140 S	280
200 T	400	280 U	560

Switching Time Test Circuit

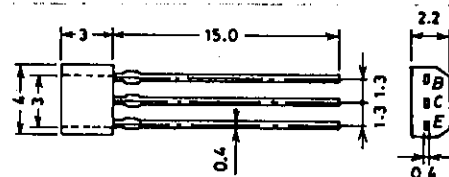


(For PNP, the polarity is reversed.)

Unit(Resistance : Ω , Capacitance : F)

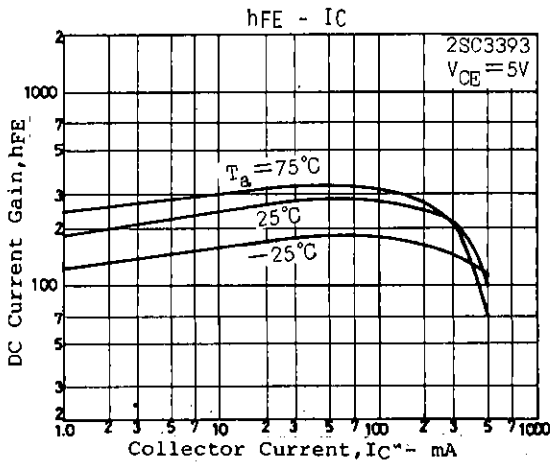
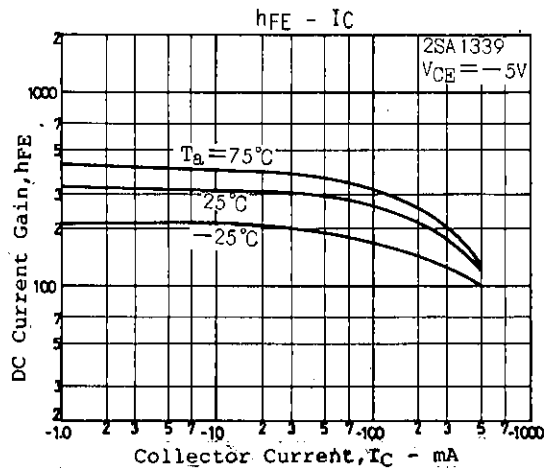
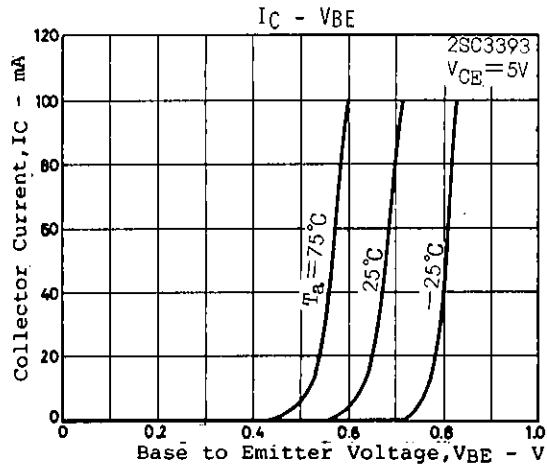
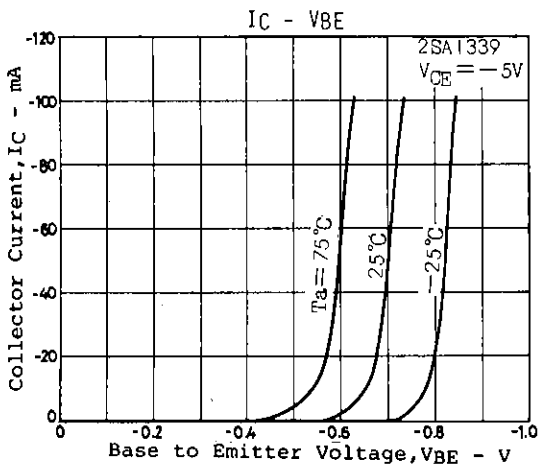
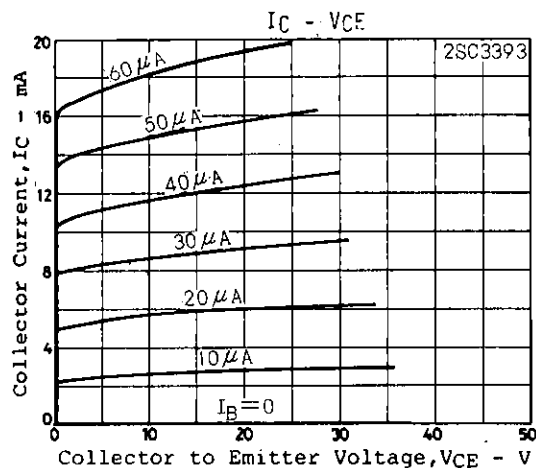
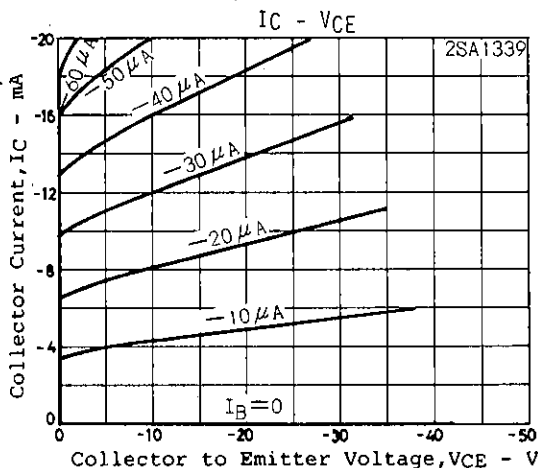
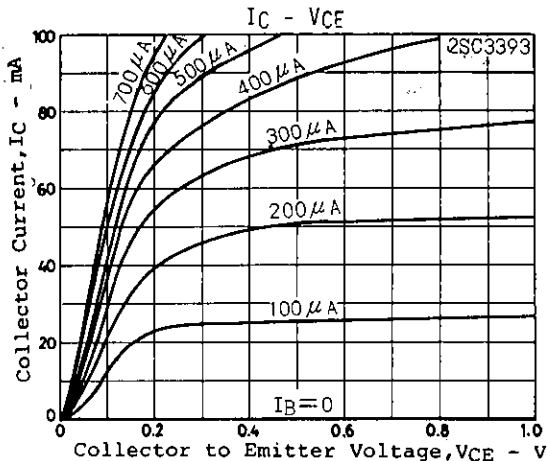
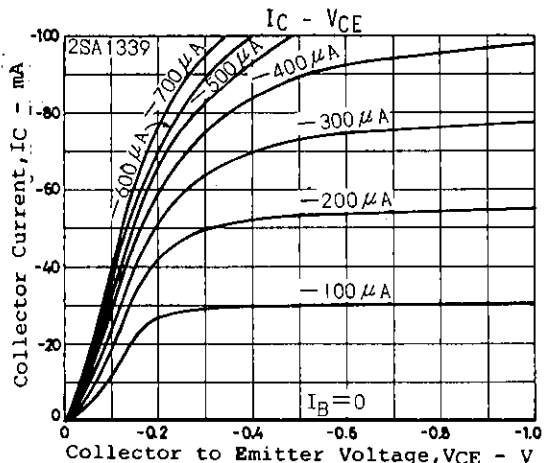
Package Dimensions 2033

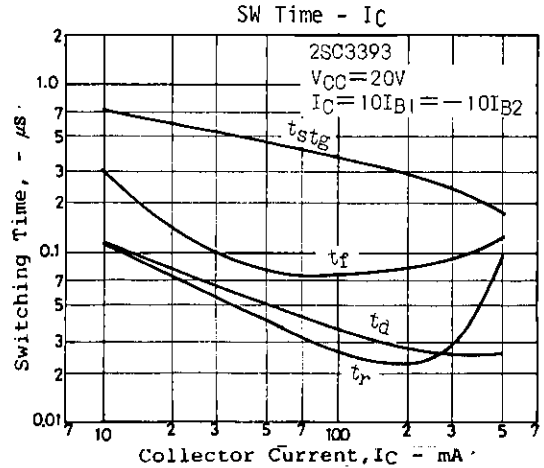
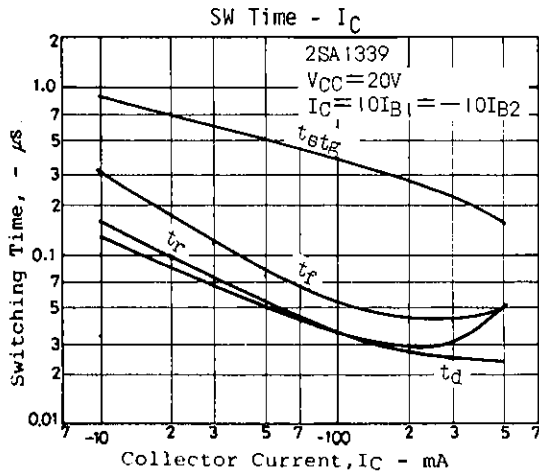
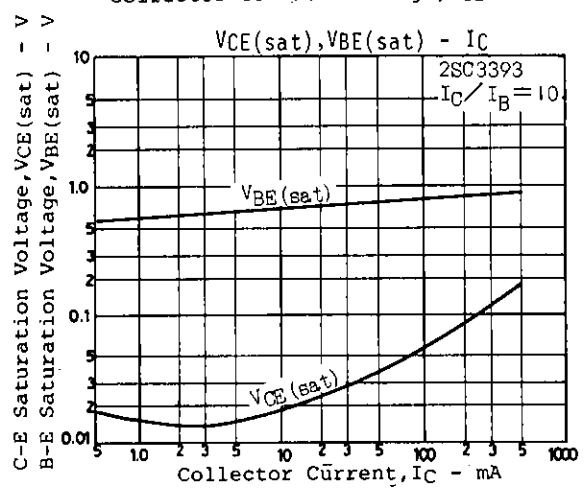
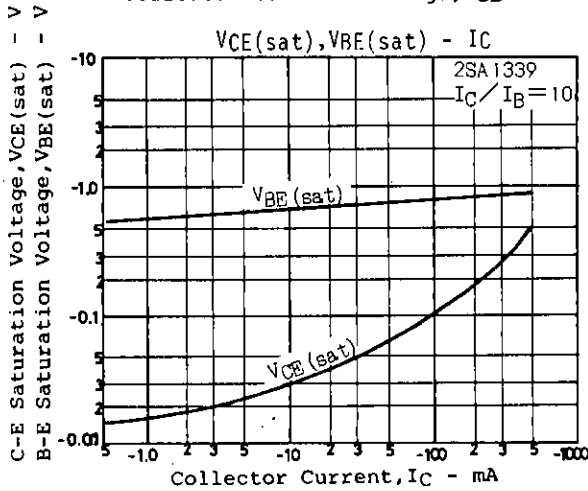
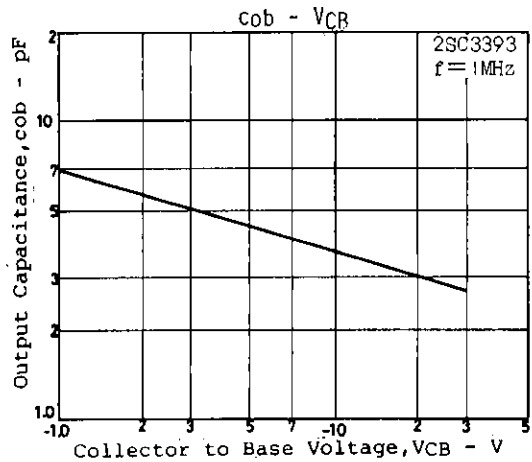
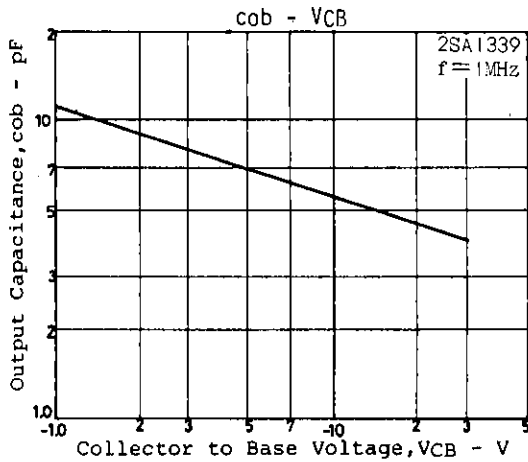
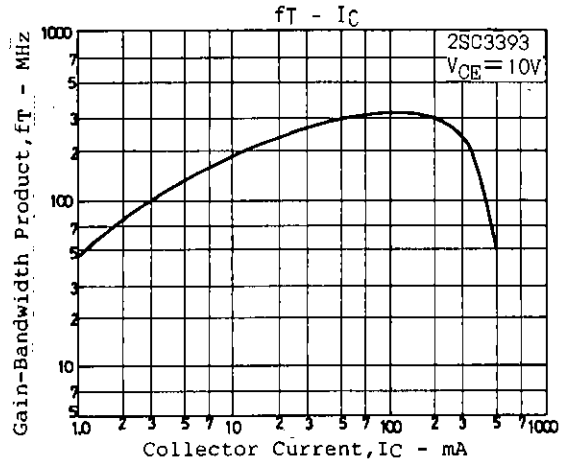
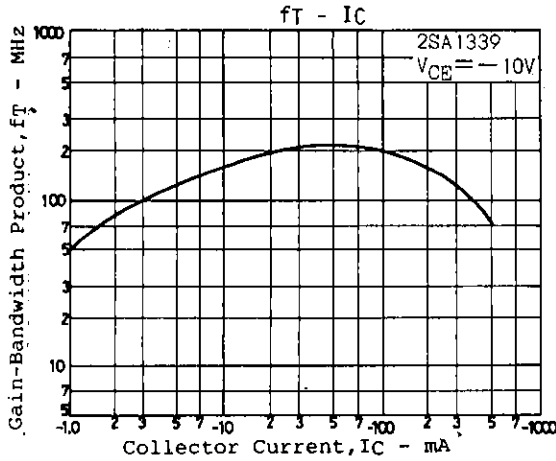
(unit: mm)

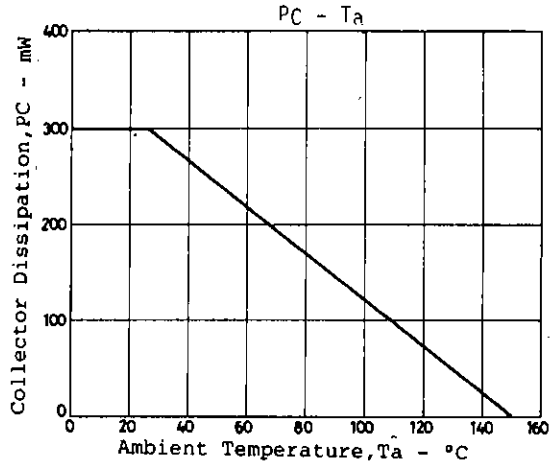
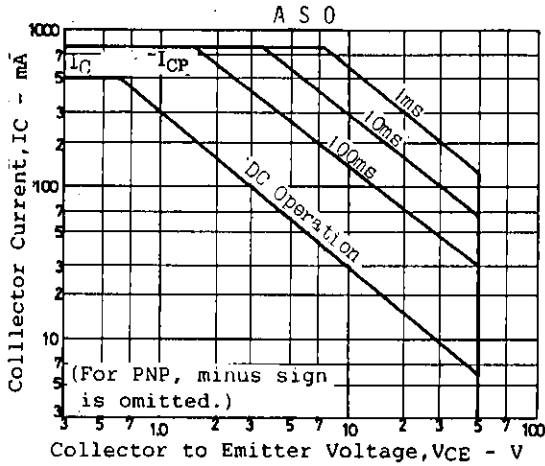


B: Base
C: Collector
E: Emitter

SANYO: SPA







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