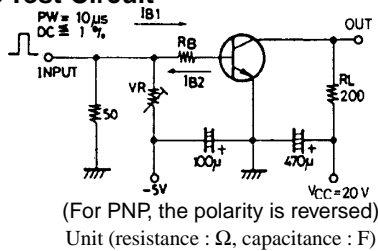


**SANYO****High-Speed Switching Applications****Features**

- 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.

**Switching Time Test Circuit**

() : 2SA1339

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

Parameter	Symbol	Conditions	Ratings	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  $T_a = 25^\circ C$** 

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=(-)40V, I_E=0$			(-)0.1	$\mu A$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=(-)4V, I_C=0$			(-)0.1	$\mu A$
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 (200)		MHz
Common Base Output Capacitance	$C_{ob}$	$V_{CB}=(-)10V, f=1MHz$		3.7 (5.6)		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)100mA, I_B=(-)10mA$		0.1 (0.15)	0.3 (0.4)	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)100mA, I_B=(-)10mA$		0.8	1.2	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)10\mu A, I_E=0$	(-)60			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)100\mu A, R_{BE}=\infty$	(-)50			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=(-)10\mu A, I_C=\infty$	(-)5			V
Turn-ON Time	$t_{on}$			70(70)		ns
Storage Time	$t_{stg}$	$V_{CC}=20V, I_C=10I_{B1}=-10I_{B2}=100mA$		400 (400)		ns
Fall Time	$t_f$			70(50)		ns

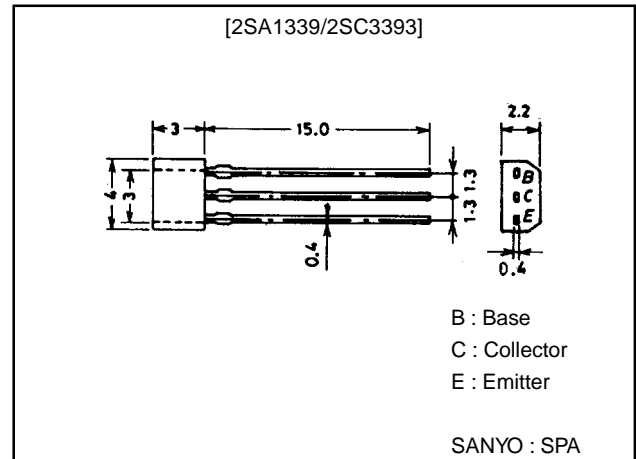
\* : The 2SA1339/2SC3393 are classified by 10mA  $h_{FE}$  as follows :

100	R	200	140	T	280	200	S	400	280	U	560
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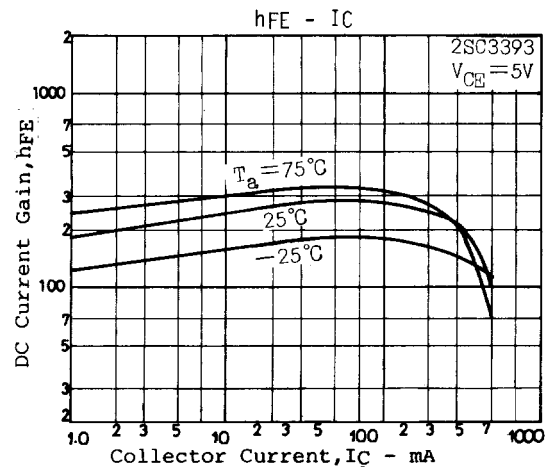
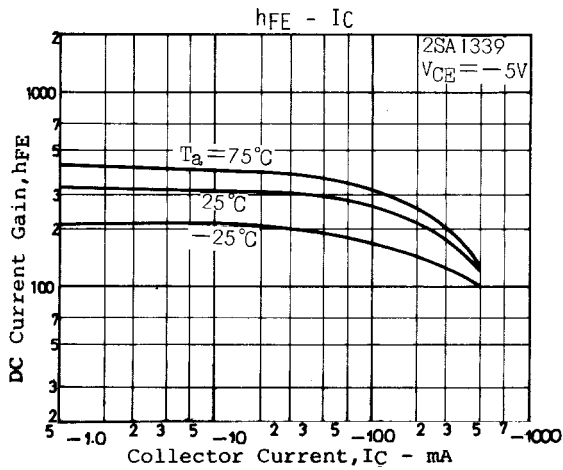
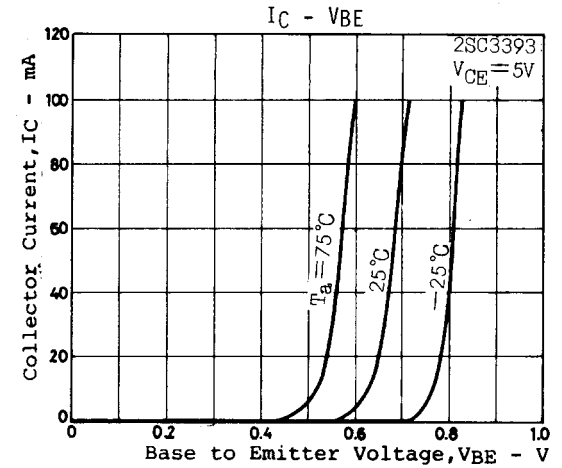
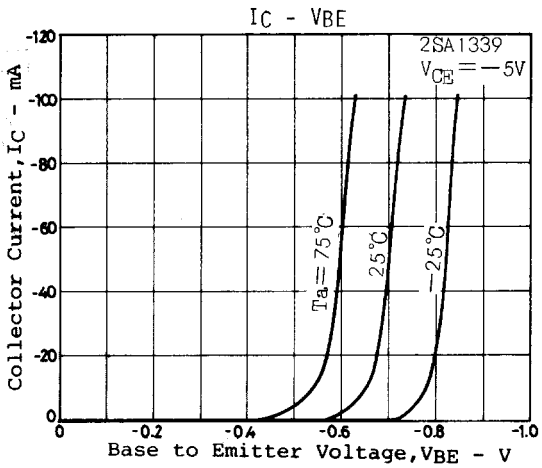
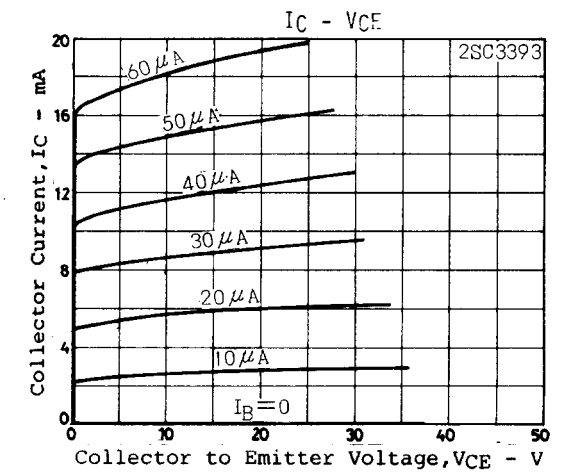
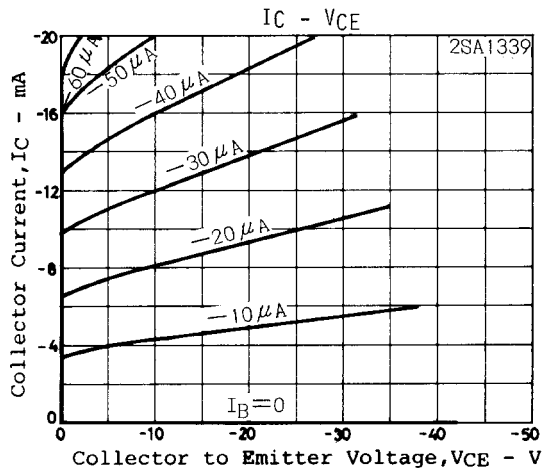
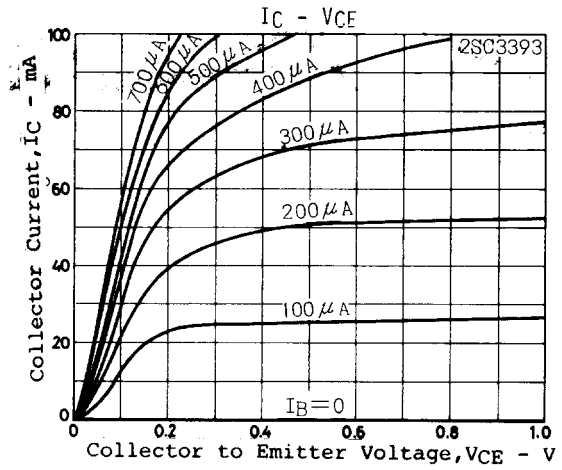
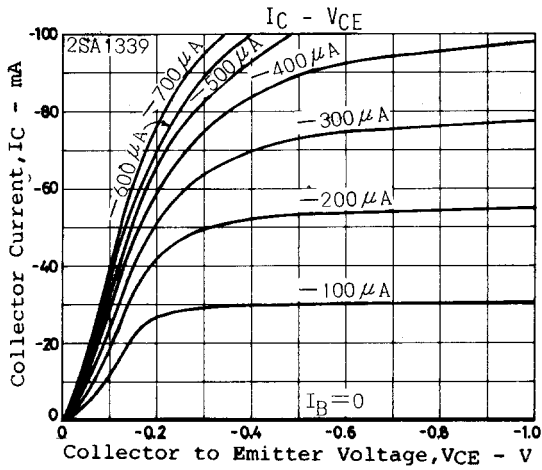
**Package Dimensions**

unit:mm

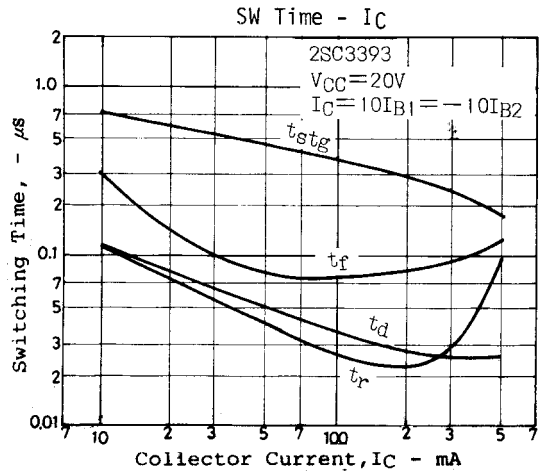
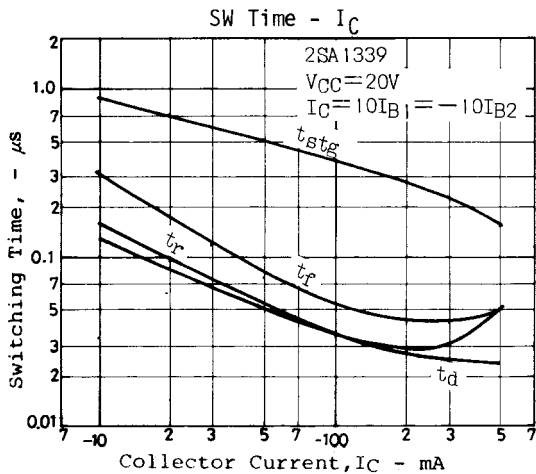
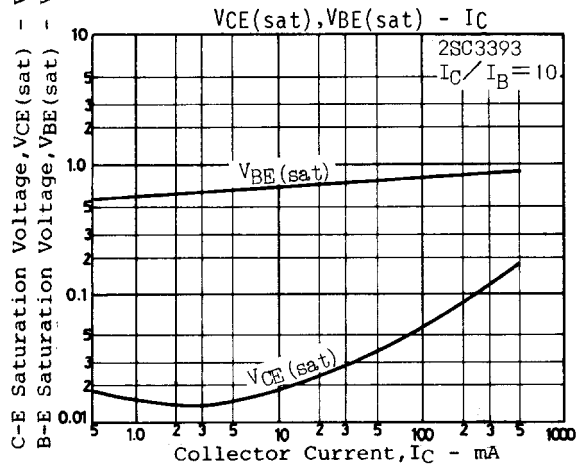
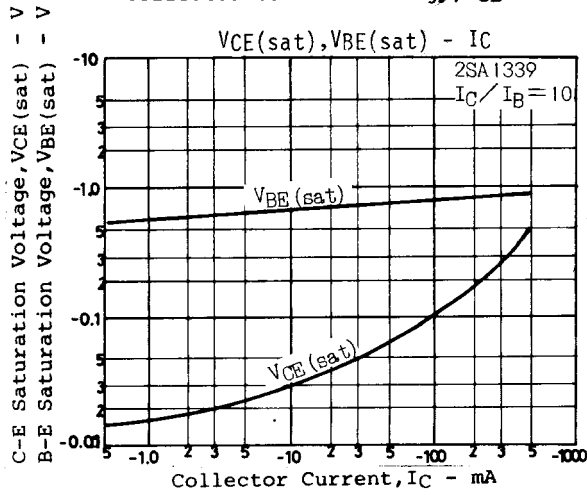
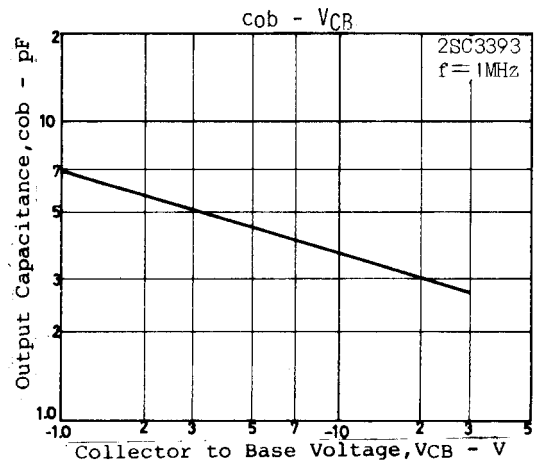
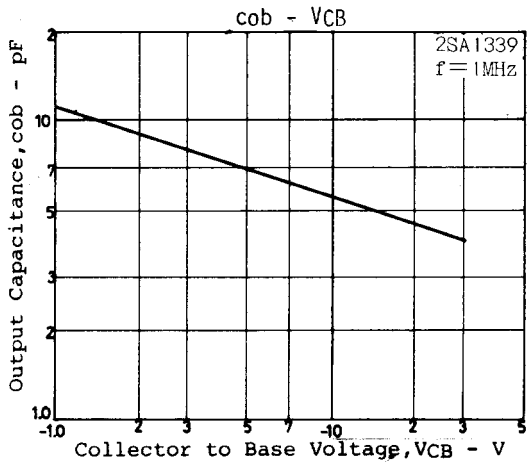
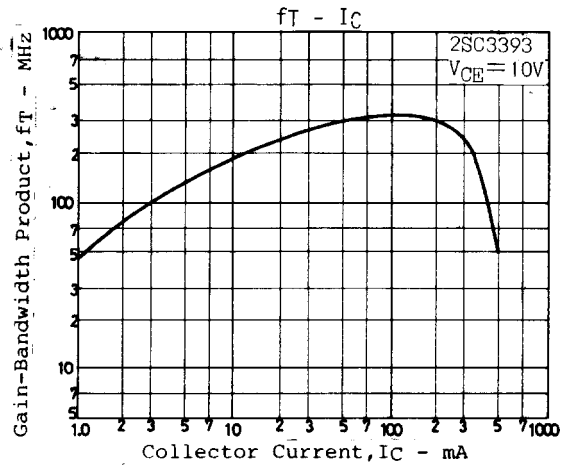
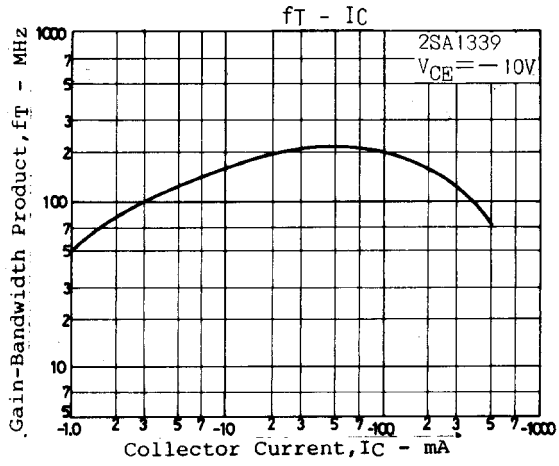
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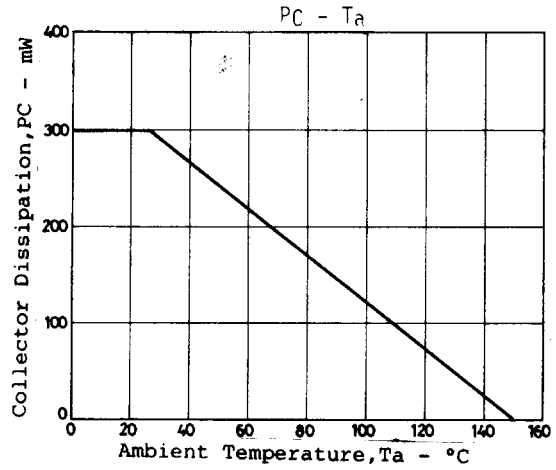
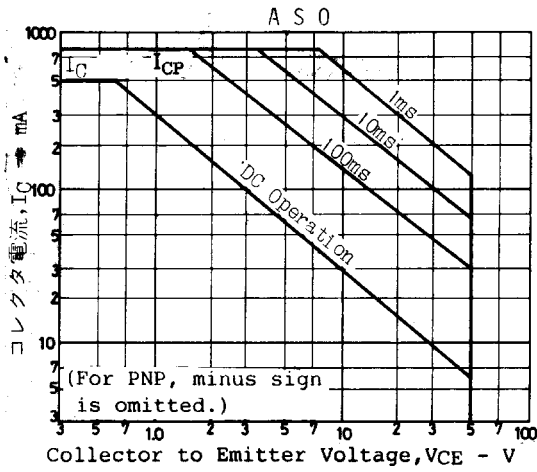
2SA1339/2SC3393



# 2SA1339/2SC3393



## 2SA1339/2SC3393



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