

SANYO	No.2811	2SC4452
	NPN Epitaxial Planar Silicon Transistor High-Speed Switching Applications	

Features

- Fast switching speed
- Low collector saturation voltage
- High gain-bandwidth product
- Small collector capacity
- Very small-sized package permitting the 2SC4452-applied sets to be made small and slim

Absolute Maximum Ratings at Ta = 25°C

		unit
Collector to Base Voltage	V _{CB0}	40 V
Collector to Emitter Voltage	V _{CES}	40 V
Collector to Emitter Voltage	V _{CEO}	15 V
Emitter to Base Voltage	V _{EBO}	5 V
Collector Current	I _C	200 mA
Collector Current(Pulse)	I _{CP}	500 mA
Base Current	I _B	40 mA
Collector Dissipation	P _C	150 mW
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 _{CBO}	V _{CB} = 20V, I _E = 0			0.1	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} = 3V, I _C = 0			0.1	μA
DC Current Gain	h _{FE}	V _{CE} = 1V, I _C = 10mA	*50	90	*200	
Gain-Bandwidth Product	f _T	V _{CE} = 10V, I _C = 10mA	450	750		MHz
Collector Capacitance	c _{ob}	V _{CB} = 5V, f = 1MHz		1.4	4.0	pF
C-E Saturation Voltage	V _{CE(sat)}	I _C = 10mA, I _B = 1mA		0.13	0.25	V
B-E Saturation Voltage	V _{BE(sat)}	I _C = 10mA, I _B = 1mA		0.80	0.85	V
C-B Breakdown Voltage	V _{(BR)CBO}	I _C = 10μA, I _E = 0	40			V
C-E Breakdown Voltage	V _{(BR)CEO}	I _C = 1mA, R _{BE} = ∞	15			V
E-B Breakdown Voltage	V _{(BR)EBO}	I _E = 10μA, I _C = 0	5			V
Turn-ON Time	t _{on}	See specified Test Circuit.		8.0		ns
Storage Time	t _{stg}			6.0		ns
Turn-OFF Time	t _{off}			12		ns

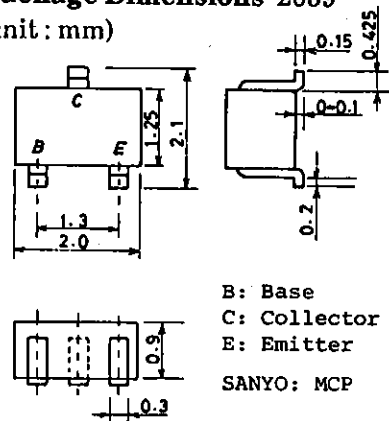
*: The 2SC4452 is classified by 10mA h_{FE} as follows:

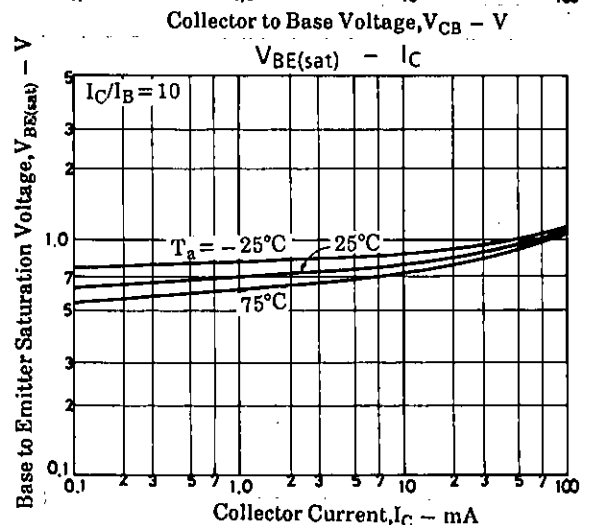
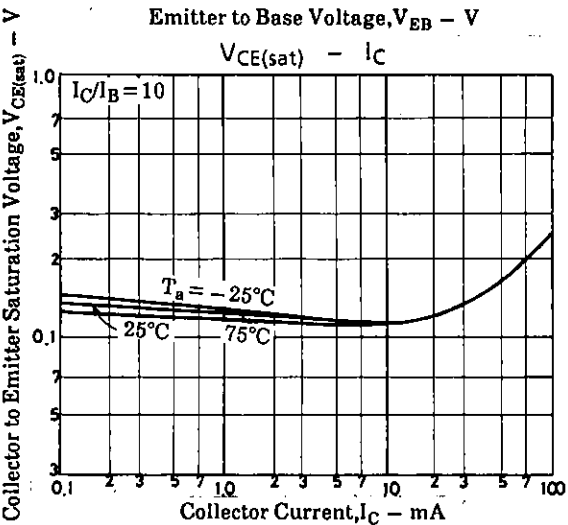
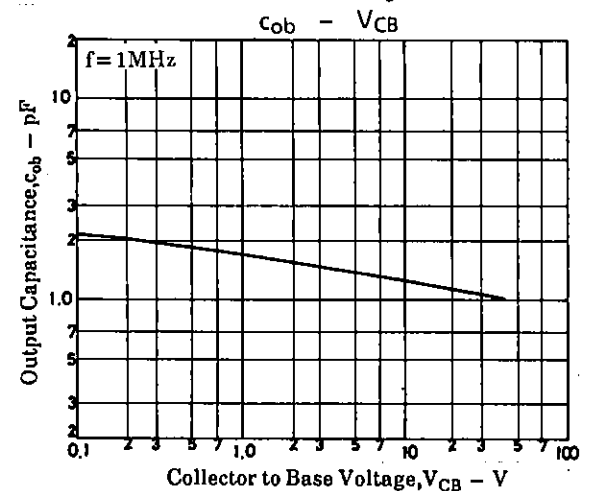
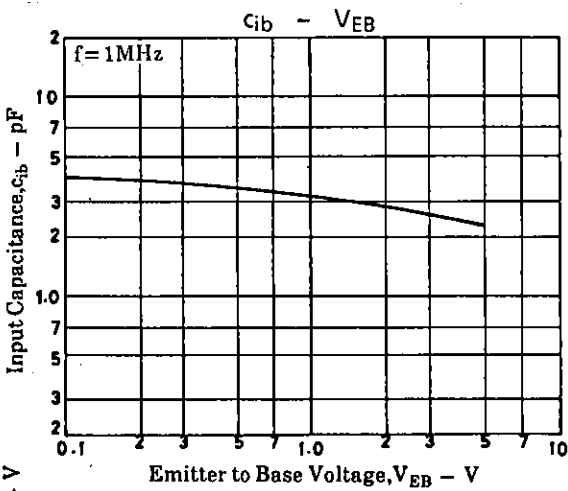
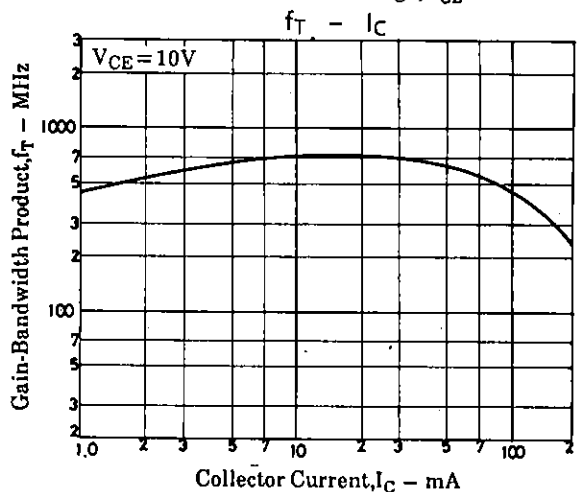
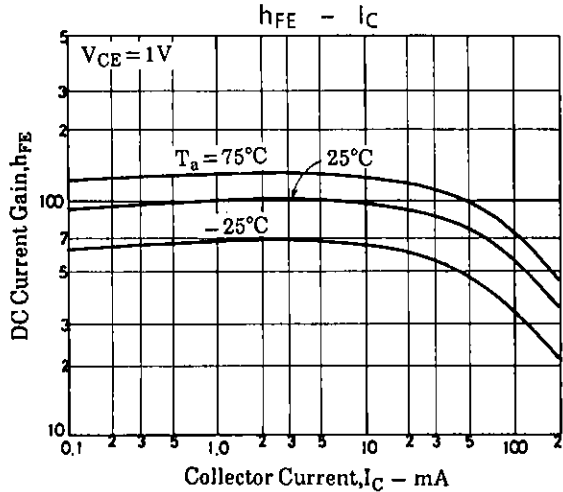
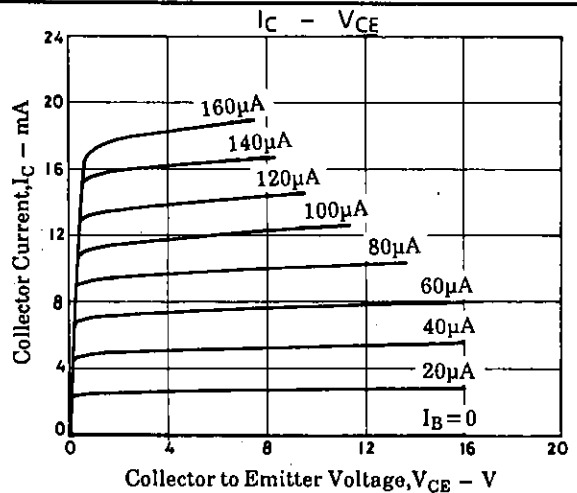
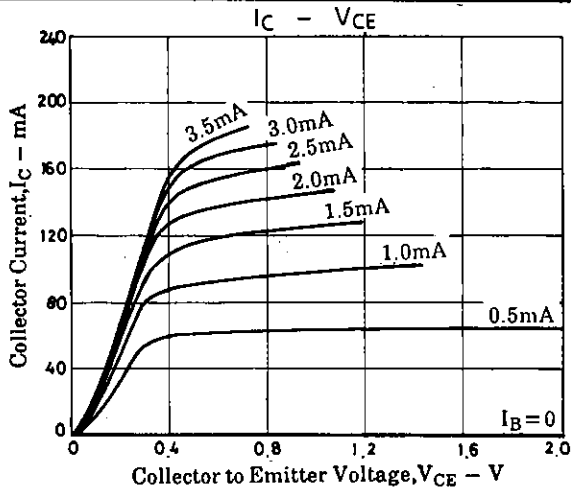
50	2	100	70	3	140	100	4	200
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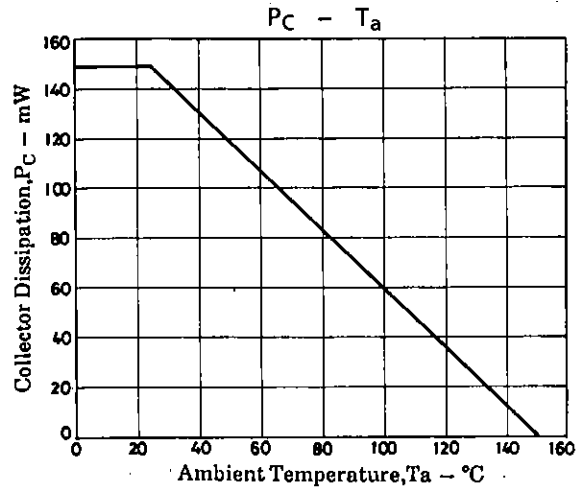
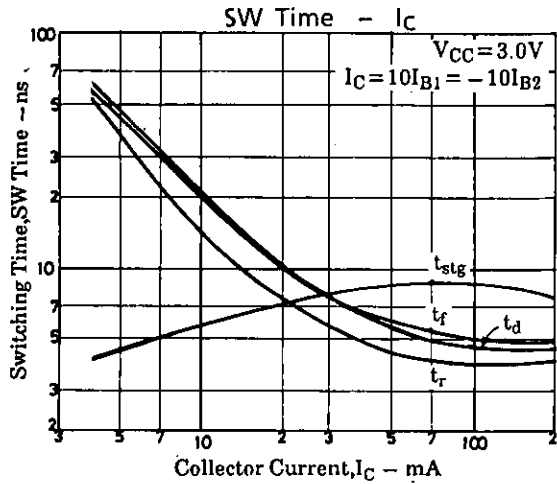
Marking: ST

h_{FE} rank: 2,3,4

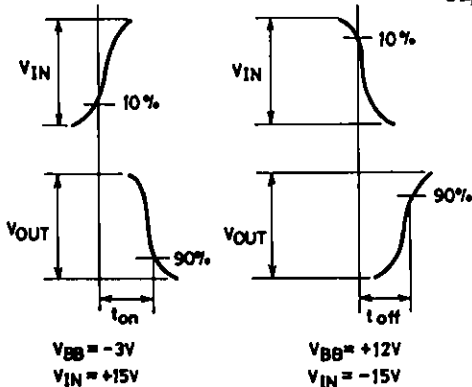
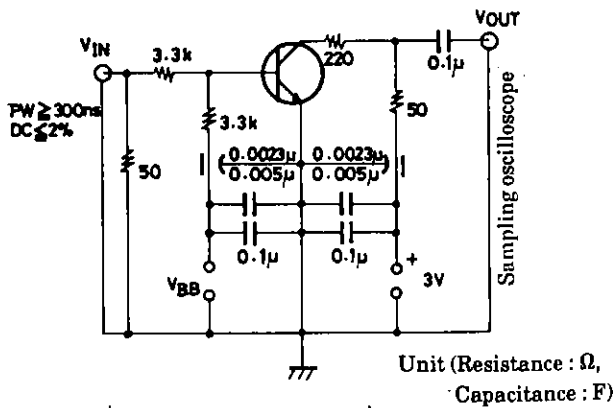
Package Dimensions 2059
(unit: mm)



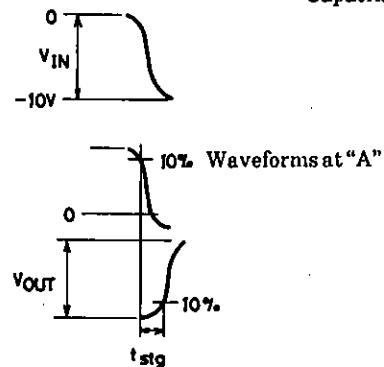
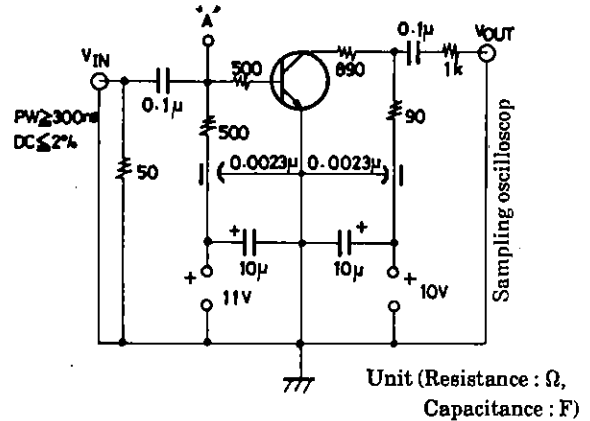




t_{on}, t_{off} Test Circuit



t_{stg} Test Circuit



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