

<b>SANYO</b>	No.3132	<b>2SA1728</b>
	PNP Epitaxial Planar Silicon Transistor	
High-Speed Switching Applications		

**Features**

- Adoption of FBET process
- Low collector-to-emitter saturation voltage
- Fast switching speed
- Small-sized package

**Absolute Maximum Ratings at Ta = 25°C**

			unit
Collector to Base Voltage	V <sub>CB0</sub>	-50	V
Collector to Emitter Voltage	V <sub>CE0</sub>	-40	V
Emitter to Base Voltage	V <sub>EB0</sub>	-5	V
Collector Current	I <sub>C</sub>	-500	mA
Collector Current(Pulse)	I <sub>CP</sub>	-1	A
Collector Dissipation	P <sub>C</sub>	200	mW
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55 to +150	°C

**Electrical Characteristics at Ta = 25°C**

			min	typ	max	unit
Collector Cutoff Current	I <sub>CB0</sub>	V <sub>CB</sub> = -40V, I <sub>E</sub> = 0			-0.5	μA
Emitter Cutoff Current	I <sub>EB0</sub>	V <sub>EB</sub> = -3V, I <sub>C</sub> = 0			-0.5	μA
DC Current Gain	h <sub>FE</sub> (1)	V <sub>CE</sub> = -2V, I <sub>C</sub> = -50mA	70*		280*	
	h <sub>FE</sub> (2)	V <sub>CE</sub> = -2V, I <sub>C</sub> = -500mA	25			
Gain-Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> = -2V, I <sub>C</sub> = -50mA		350		MHz
Output Capacitance	c <sub>ob</sub>	V <sub>CB</sub> = -10V, f = 1MHz		6		pF
C-E Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = -200mA, I <sub>B</sub> = -10mA	-0.2		-0.5	V
B-E Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = -200mA, I <sub>B</sub> = -10mA	-0.8		-1.2	V
C-B Breakdown Voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> = -10μA, I <sub>E</sub> = 0	-50			V
C-E Breakdown Voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> = -1mA, R <sub>BE</sub> = ∞	-40			V
E-B Breakdown Voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> = -10μA, I <sub>C</sub> = 0	-5			V
Turn-ON Time	t <sub>on</sub>	See specified Test Circuit.		60	120	ns
Storage Time	t <sub>stg</sub>	∞		120	220	ns
Turn-OFF Time	t <sub>off</sub>	∞		170	320	ns

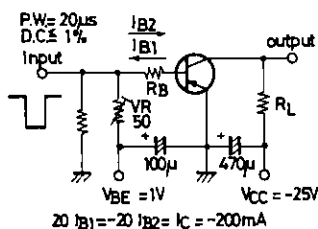
\*: The 2SA1728 is classified by 50mA h<sub>FE</sub> as follows :

70	3	140	100	4	200	140	5	280
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Marking : DS

h<sub>FE</sub> rank : 3,4,5

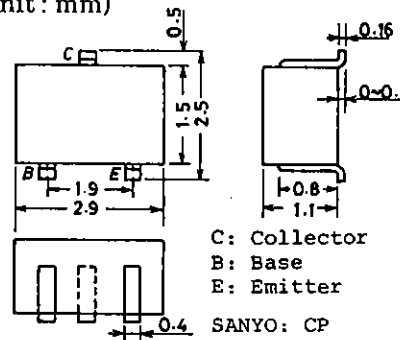
**Switching Time Test Circuit**



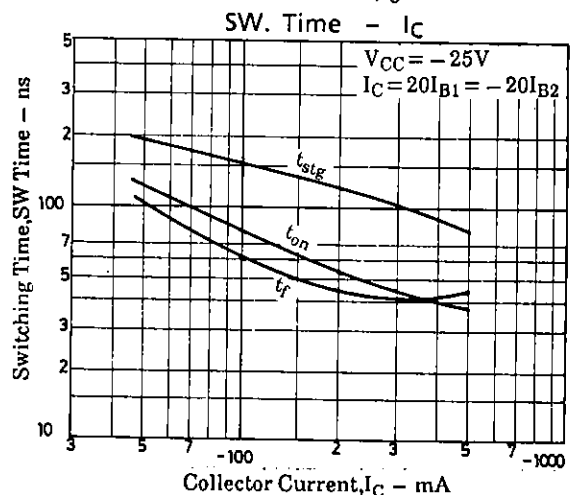
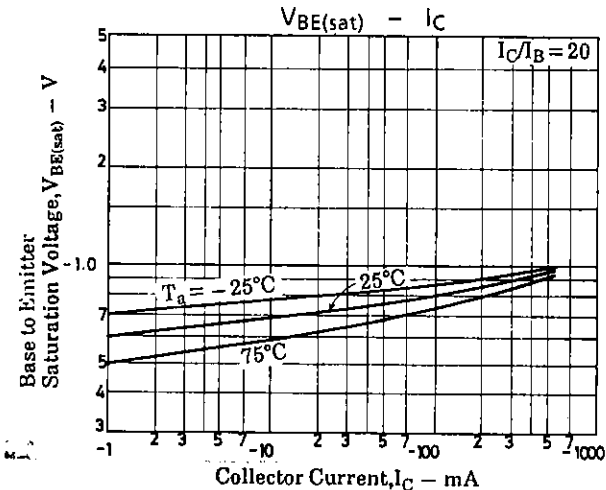
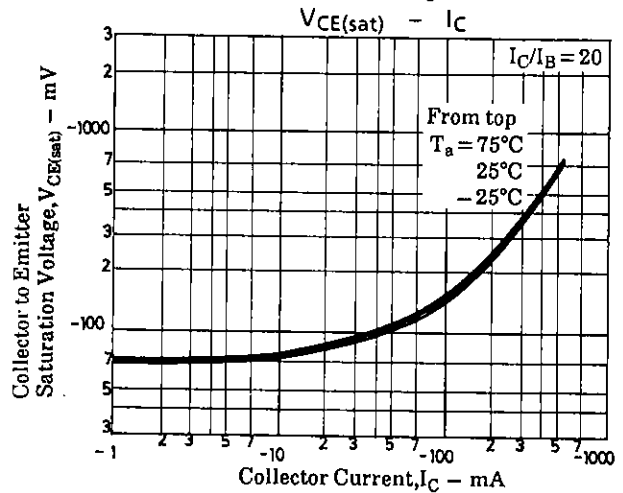
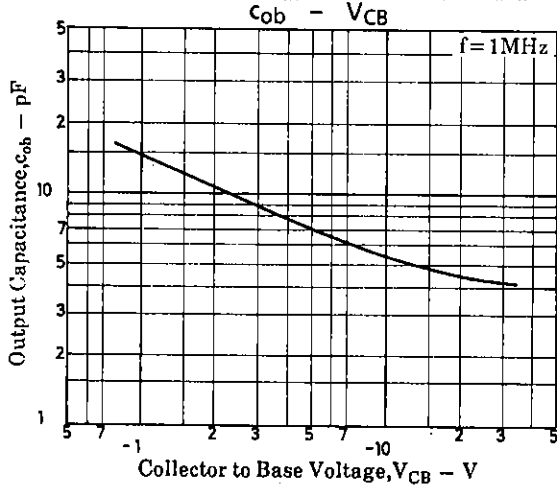
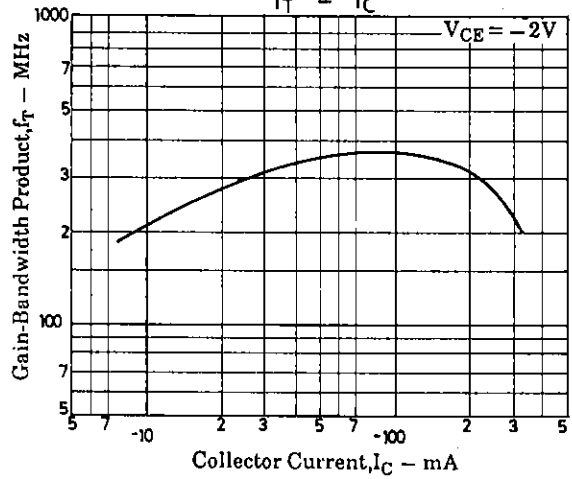
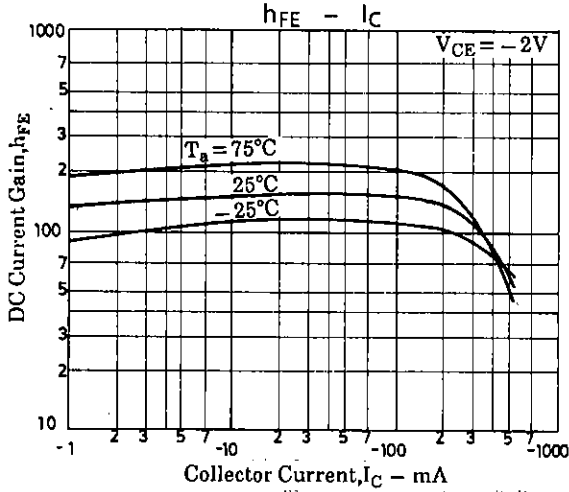
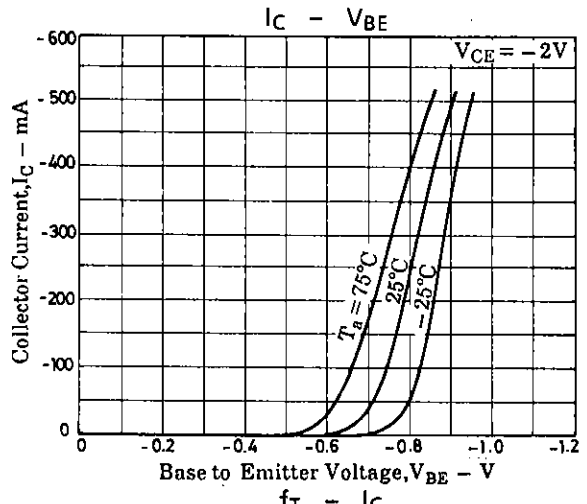
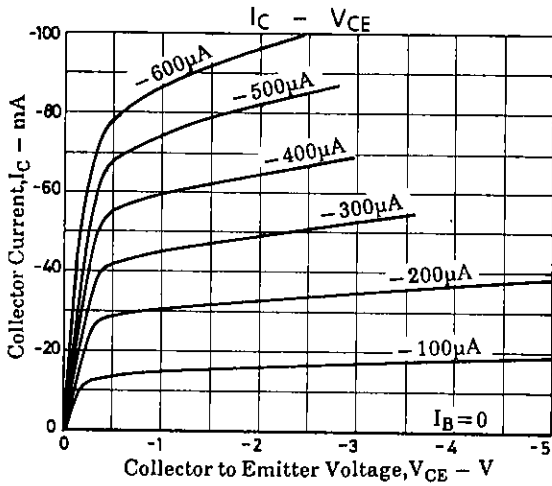
Unit (Resistance : Ω, Capacitance : F)

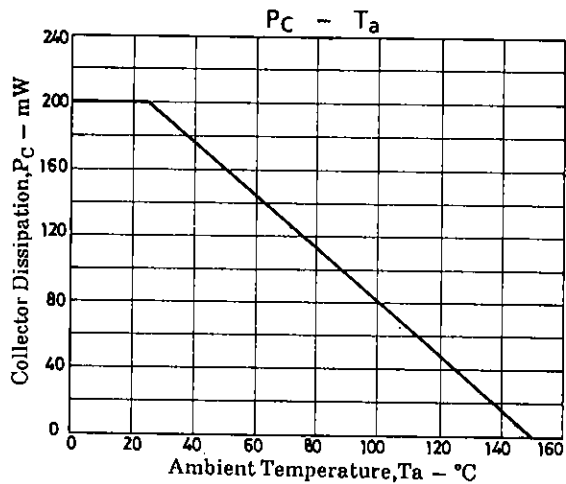
**Package Dimensions 2018A**

(unit : mm)



C: Collector  
B: Base  
E: Emitter  
SANYO: CP





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