

SANYO

No.3091

2SA1702

PNP Epitaxial Planar Silicon Transistor

High-Current Switching Applications

Features

- Adoption of FBET, MBIT processes
- Low saturation voltage
- Large current capacity
- Fast switching speed

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

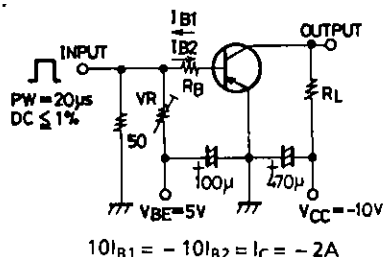
			unit
Collector to Base Voltage	V_{CB0}	-25	V
Collector to Emitter Voltage	V_{CEO}	-20	V
Emitter to Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-5	A
Collector Current(Pulse)	I_{CP}	-8	A
Collector Dissipation	P_C	1	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

Electrical Characteristics at $T_a = 25^\circ\text{C}$

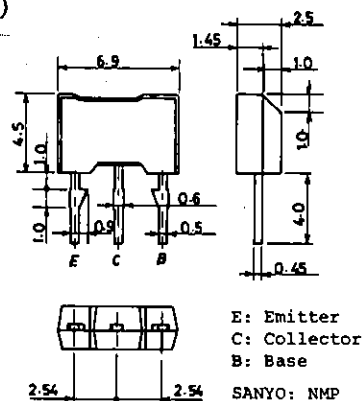
			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = -20\text{V}, I_E = 0$			-500	nA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = -4\text{V}, I_C = 0$			-500	nA
DC Current Gain	$h_{FE}(1)$	$V_{CE} = -2\text{V}, I_C = -500\text{mA}$	100*		400*	
	$h_{FE}(2)$	$V_{CE} = -2\text{V}, I_C = -4\text{A}$	60			
Gain-Bandwidth Product	f_T	$V_{CE} = -5\text{V}, I_C = -200\text{mA}$		320		MHz
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = -3\text{A}, I_B = -60\text{mA}$	-250	-500		mV
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = -3\text{A}, I_B = -60\text{mA}$	-1	-1.3		V
Output Capacitance	c_{ob}	$V_{CB} = -10\text{V}, f = 1\text{MHz}$		60		pF
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -10\mu\text{A}, I_E = 0$	-25			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1\text{mA}, R_{BE} = \infty$	-20			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -10\mu\text{A}, I_C = 0$	-5			V
Turn-ON Time	t_{on}	See specified Test Circuit.		40		ns
Storage Time	t_{stg}	"		200		ns
Fall Time	t_f	"		10		ns

*: The 2SA1702 is classified by 500mA h_{FE} as follows:

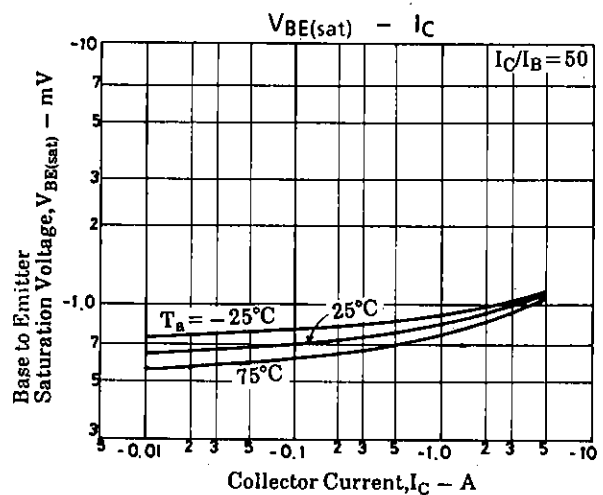
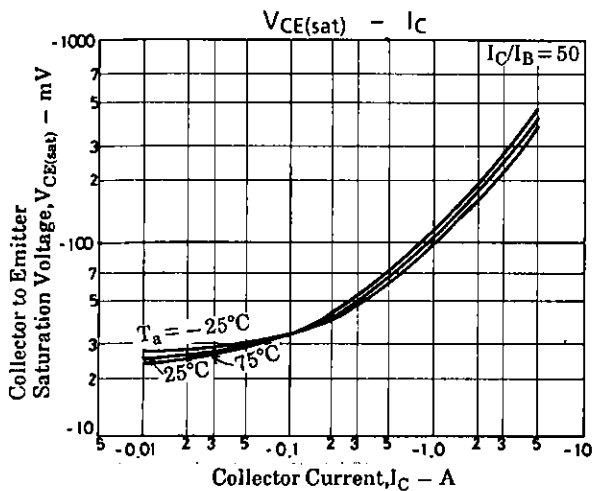
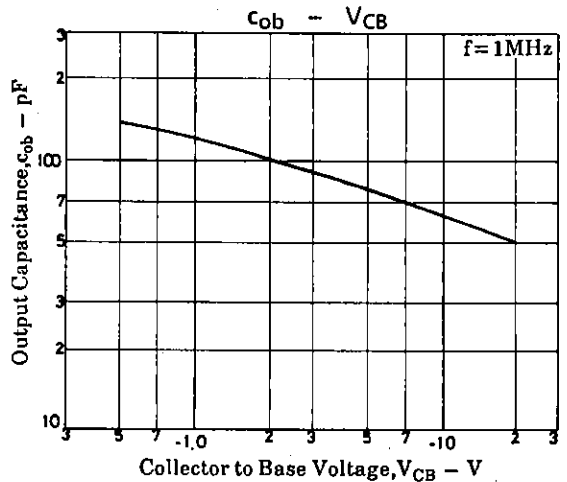
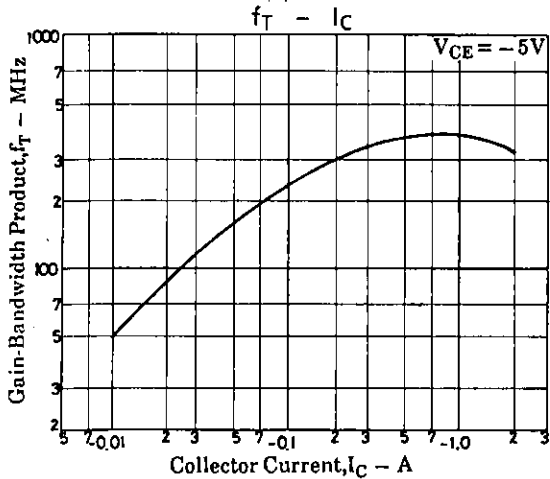
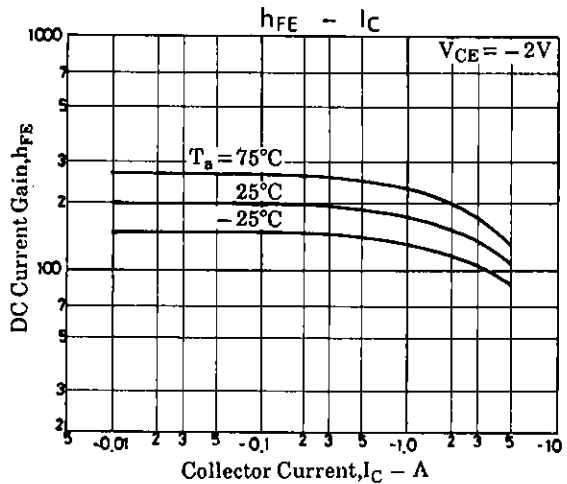
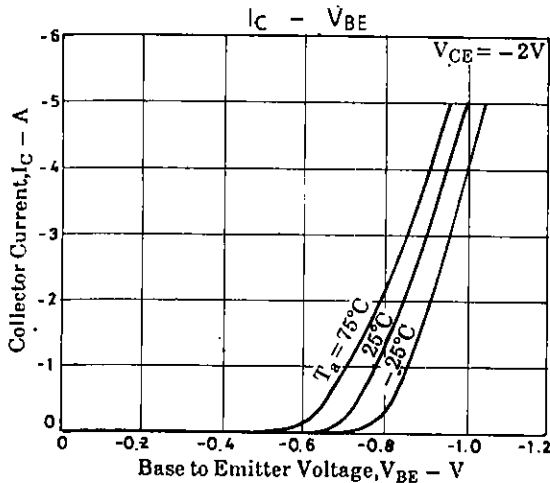
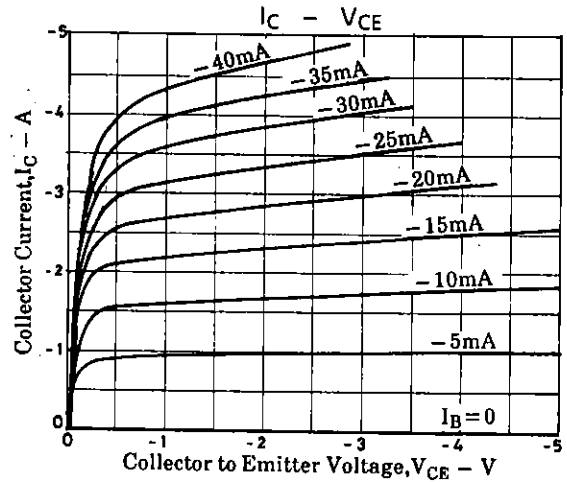
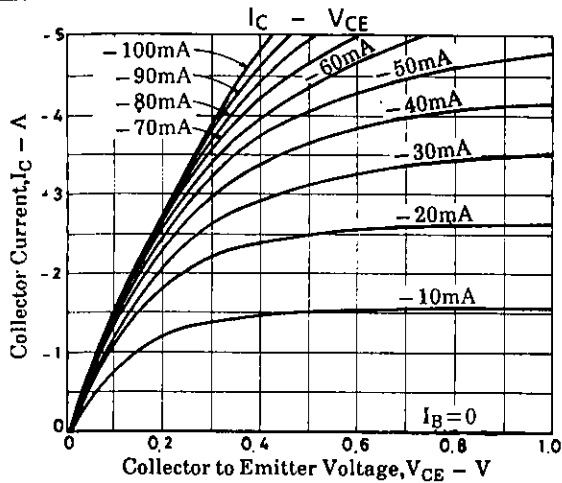
100 R 200	140 S 280	200 T 400
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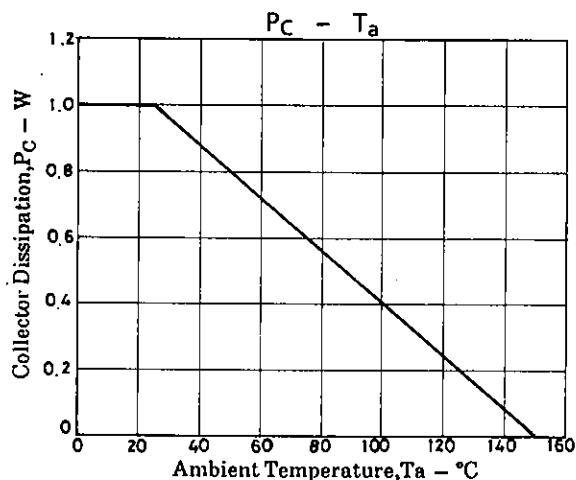
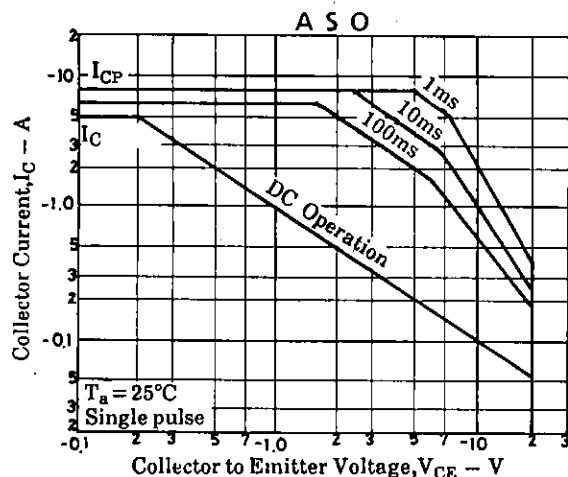
Switching Time Test Circuit**Package Dimensions 2064**

(unit: mm)

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