

2SA1728

T-37-15

2018A

PNP Epitaxial Planar Silicon Transistor

High-Speed Switching Applications

©3132

Features

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

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

		unit
Collector to Base Voltage	V_{CB0}	-50 V
Collector to Emitter Voltage	V_{CE0}	-40 V
Emitter to Base Voltage	V_{EB0}	-5 V
Collector Current	I_C	-500 mA
Peak Collector Current	i_{cp}	-1 A
Collector Dissipation	P_C	200 mW
Junction Temperature	T_j	150 $^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150 $^\circ\text{C}$

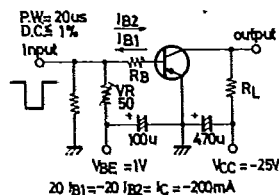
Electrical Characteristics at $T_a = 25^\circ\text{C}$

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = -40\text{V}, I_E = 0$			-0.5	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = -3\text{V}, I_C = 0$			-0.5	μA
DC Current Gain	$h_{FE}(1)$	$V_{CE} = -2\text{V}, I_C = -50\text{mA}$	70%		280%	
	$h_{FE}(2)$	$V_{CE} = -2\text{V}, I_C = -500\text{mA}$	25			
Gain-Bandwidth Product	f_T	$V_{CE} = -2\text{V}, I_C = -50\text{mA}$		350		MHz
Output Capacitance	c_{ob}	$V_{CB} = -10\text{V}, f = 1\text{MHz}$		6		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = -200\text{mA}, I_B = -10\text{mA}$	-0.2	-0.5		V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = -200\text{mA}, I_B = -10\text{mA}$	-0.8	-1.2		V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -10\mu\text{A}, I_E = 0$	-50			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1\text{mA}, R_{BE} = \infty$	-40			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.		60	120	ns
Storage Time	t_{stg}	"		120	220	ns
Turn-OFF Time	t_{off}	"		170	320	ns

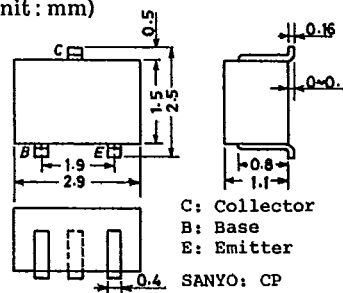
※: The 2SA1728 is classified by 50mA h_{FE} as follows:

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

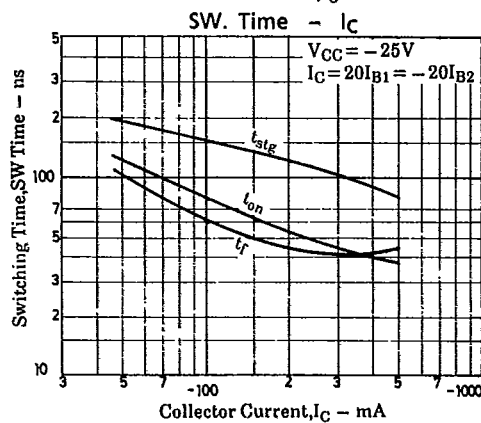
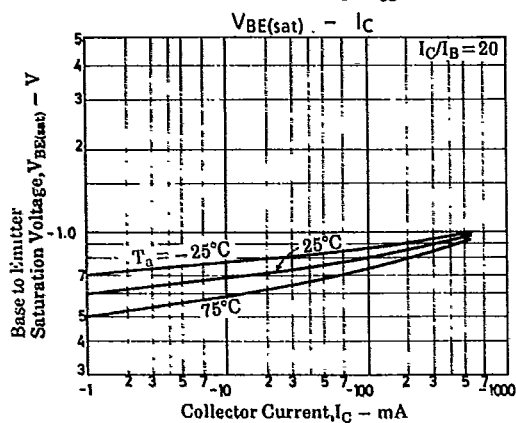
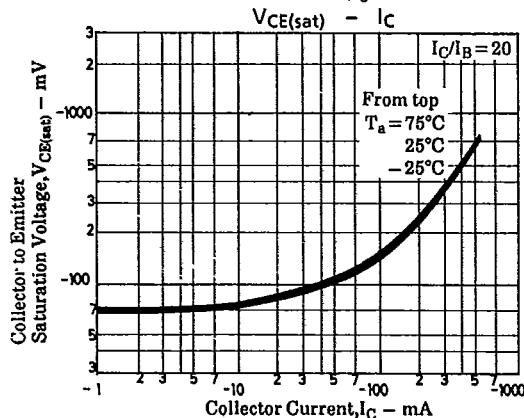
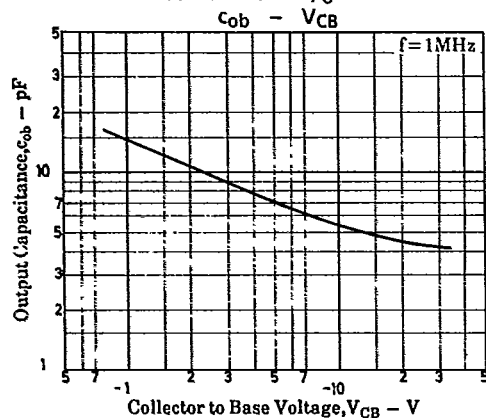
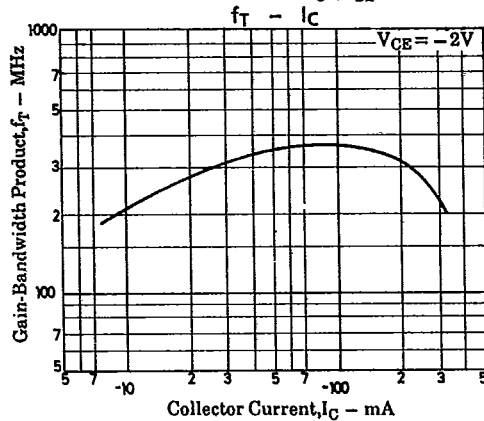
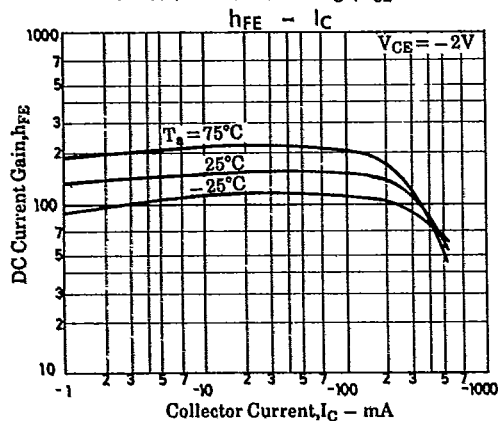
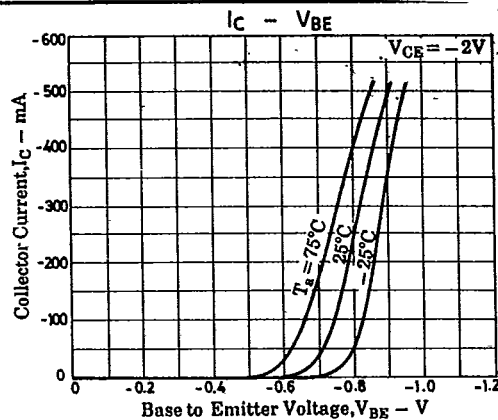
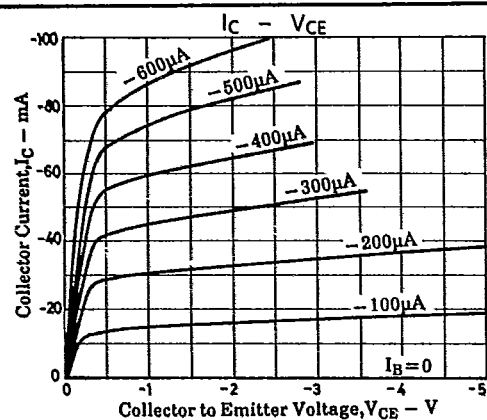
 h_{FE} rank: 3,4,5**Switching Time Test Circuit****Case Outline 2018A**

(unit: mm)



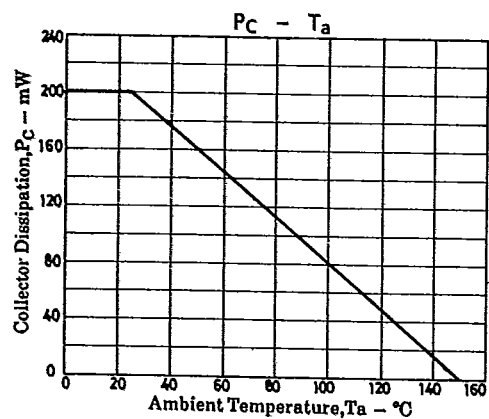
C: Collector
B: Base
E: Emitter

SANYO: CP



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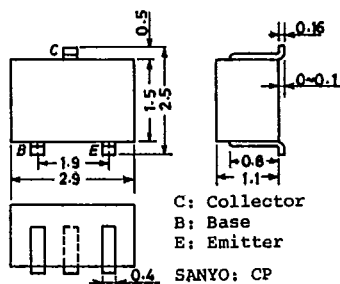


T-91-20

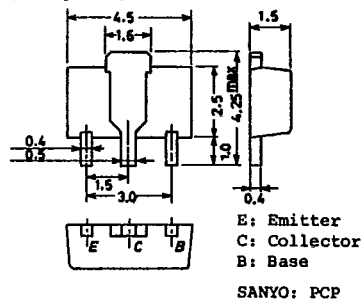
CASE OUTLINES OF SURFACE MOUNT TRANSISTORS

- All of Sanyo surface mount transistor case outlines are illustrated below.
- All dimensions are in mm, and dimensions which are not followed by min. or max. are represented by typical values.
- No marking is indicated.

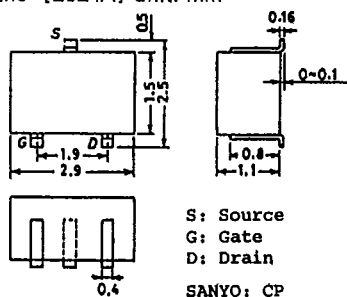
Case Outline—[2018A] unit: mm



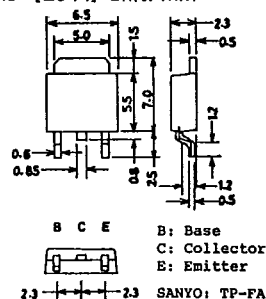
Case Outline—[2038] unit: mm



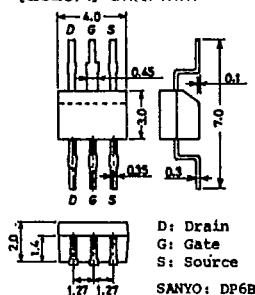
Case Outline—[2024A] unit: mm



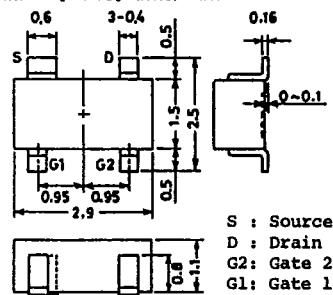
Case Outline—[2044] unit: mm



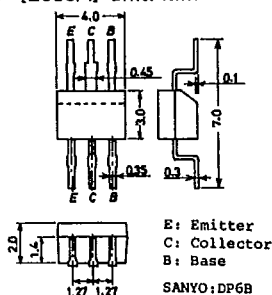
Case Outline—[2028A] unit: mm



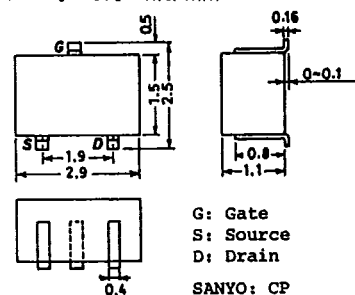
Case Outline—[2046] unit: mm



Case Outline—[2030A] unit: mm

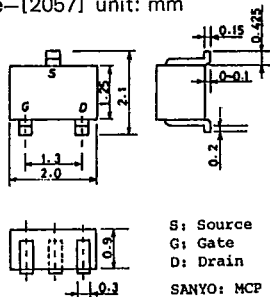


Case Outline—[2050] unit: mm

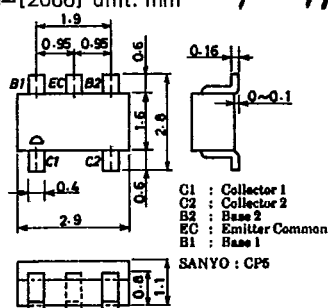


T-91-20

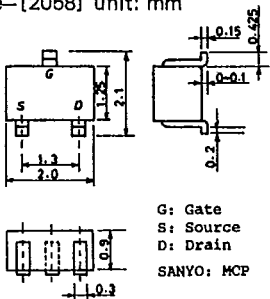
Case Outline—[2057] unit: mm



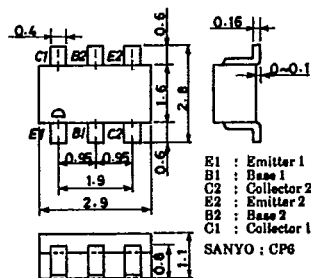
Case Outline—[2066] unit: mm



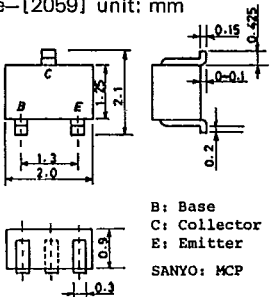
Case Outline—[2058] unit: mm



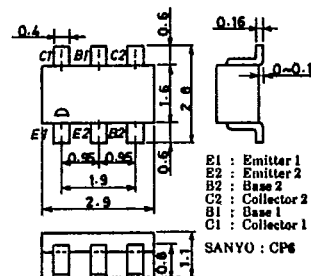
Case Outline—[2067] unit: mm



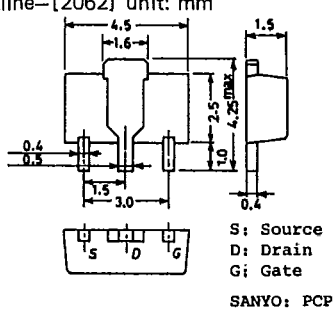
Case Outline—[2059] unit: mm



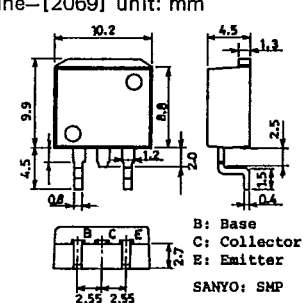
Case Outline—[2068] unit: mm



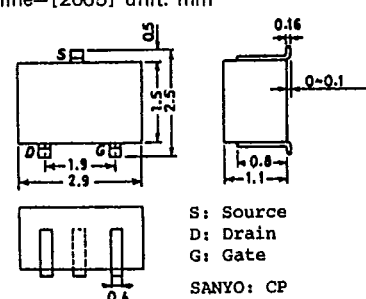
Case Outline—[2062] unit: mm



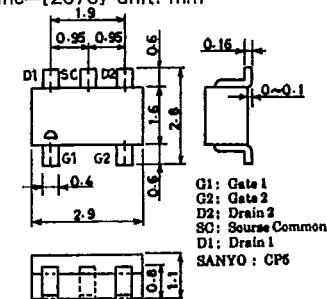
Case Outline—[2069] unit: mm



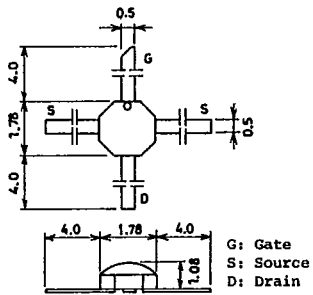
Case Outline—[2065] unit: mm



Case Outline—[2070] unit: mm

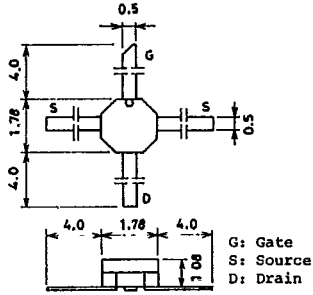


Case Outline-[2071] unit: mm



T-9120

Case Outline-[2072] unit: mm



Case Outline-[2073] unit: mm

