

2SA1729

T-37-15



2038

PNP Epitaxial Planar Silicon Transistor

High-Speed Switching Applications

©3133

Features

- Adoption of FBET, MBIT processes
- Large current capacity
- Low collector-to-emitter saturation voltage
- Fast switching speed
- Small-sized package

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Value	unit
Collector to Base Voltage	V _{CB0}	-50	V
Collector to Emitter Voltage	V _{CEO}	-40	V
Emitter to Base Voltage	V _{EBO}	-5	V
Collector Current	I _C	-1.5	A
Peak Collector Current	i _{cp}	-3	A
Collector Dissipation	P _C	1.3	W
Junction Temperature	T _J	150	°C
Storage Temperature	T _{stg}	-55 to +150	°C

Mounted on ceramic board (250mm² × 0.8mm)

Electrical Characteristics at Ta=25°C

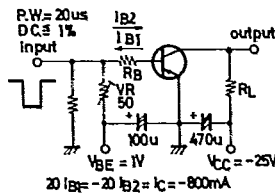
Parameter	Symbol	Test Conditions	min	typ	max	unit
Collector Cutoff Current	I _{CB0}	V _{CB} = -40V, I _E = 0			-1	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} = -3V, I _C = 0			-1	μA
DC Current Gain	h _{FE} (1)	V _{CE} = -2V, I _C = -100mA	70*		280*	
		V _{CE} = -2V, I _C = -1.5A	25			
Gain-Bandwidth Product	f _T	V _{CE} = -2V, I _C = -100mA		300		MHz
		V _{CB} = -10V, f = 1MHz		18		pF
Output Capacitance	c _{ob}	V _{CE} = -10V, f = 1MHz		18		pF
C-E Saturation Voltage	V _{CE(sat)}	I _C = -800mA, I _B = -40mA	-0.3		-0.8	V
B-E Saturation Voltage	V _{BE(sat)}	I _C = -800mA, I _B = -40mA	-0.9		-1.3	V
C-B Breakdown Voltage	V _{(BR)CBO}	I _C = -10μA, I _E = 0	-50			V
C-E Breakdown Voltage	V _{(BR)CEO}	I _C = -1mA, R _{BE} = ∞	-40			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.		50	100	ns
Storage Time	t _{stg}	"		120	220	ns
Turn-OFF Time	t _{off}	"		150	300	ns

* : The 2SA1729 is classified by 100mA h_{FE} as follows :

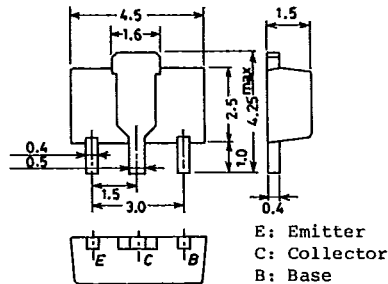
70	Q	140	100	R	200	140	S	280
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Marking : AG
h_{FE} rank : Q,R,S

Switching Time Test Circuit

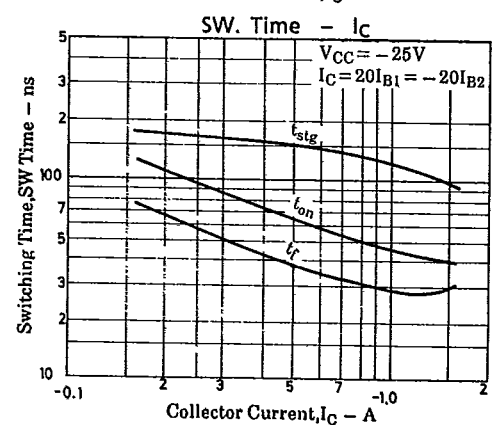
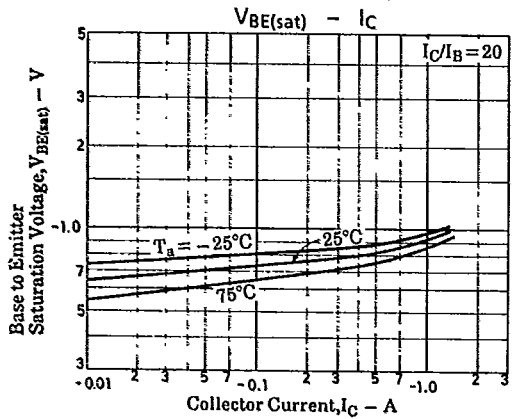
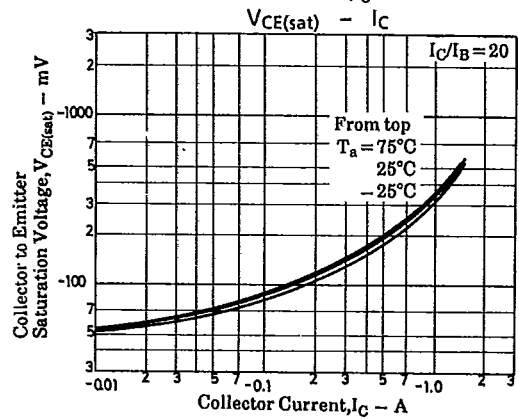
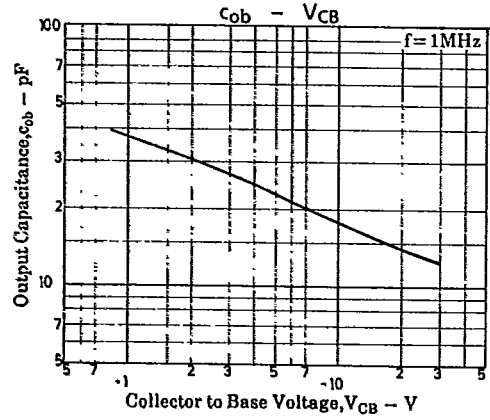
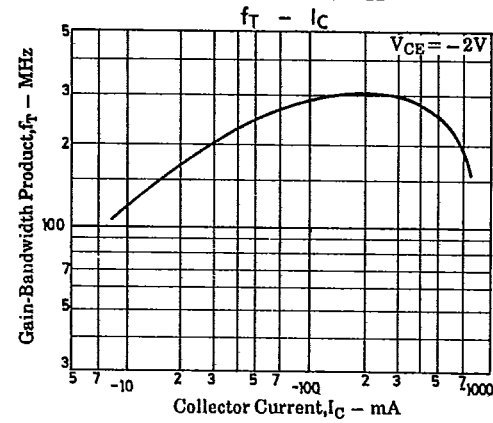
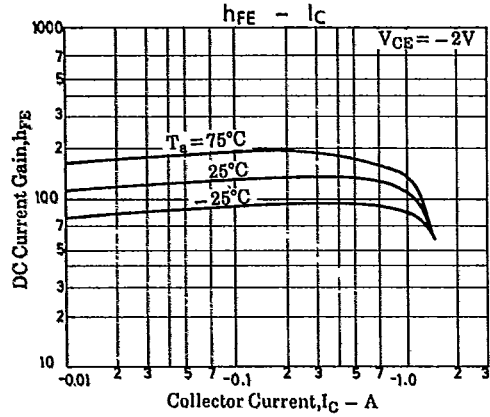
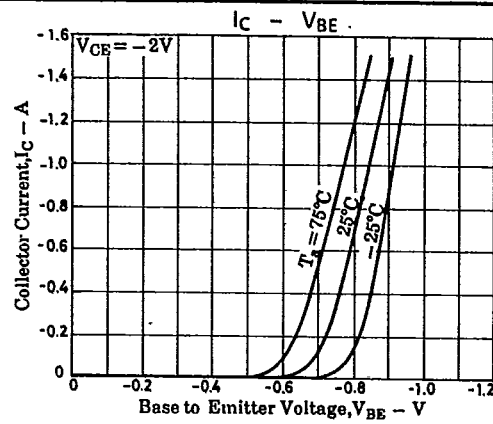
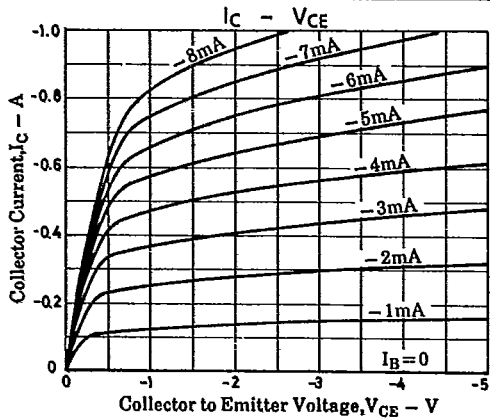


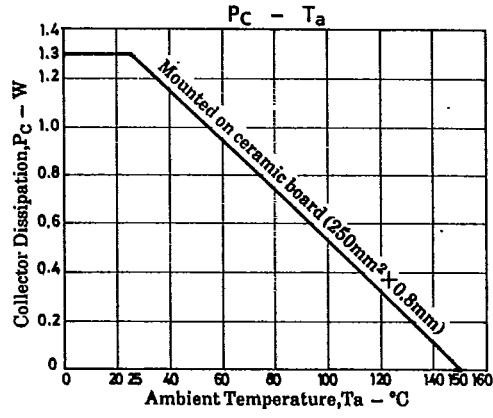
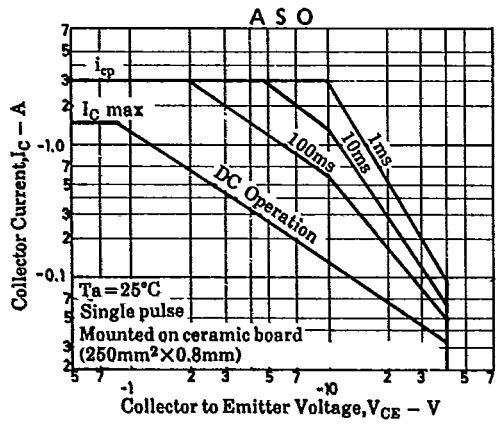
Case Outline 2038 (unit : mm)



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

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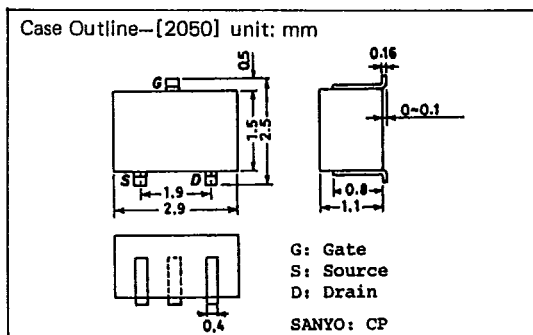
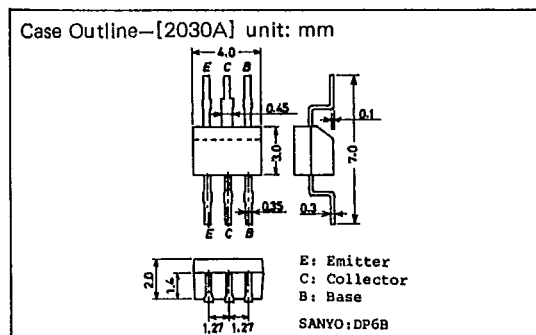
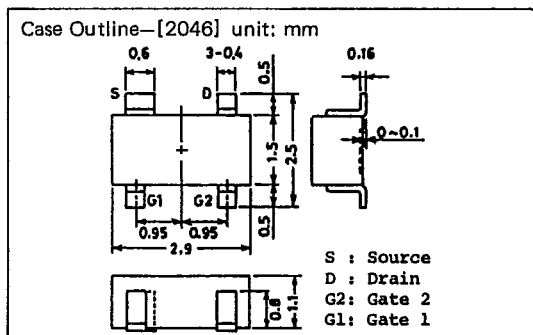
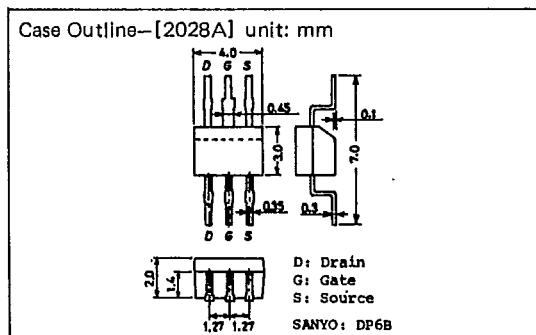
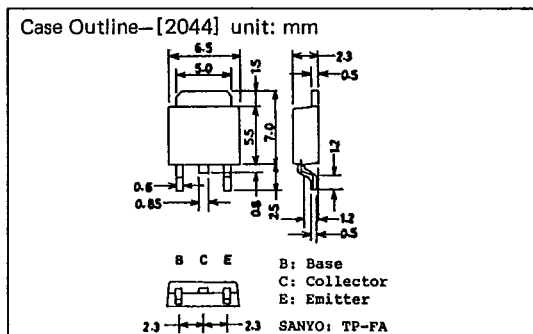
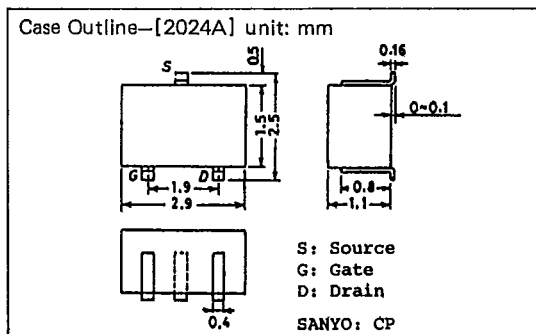
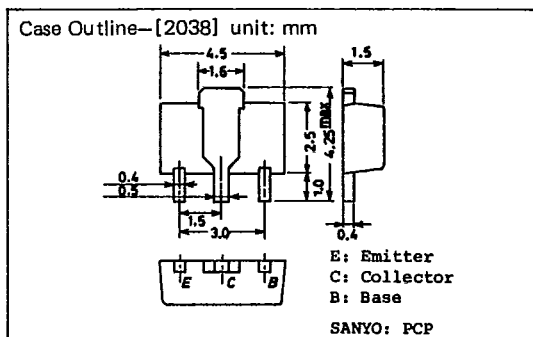
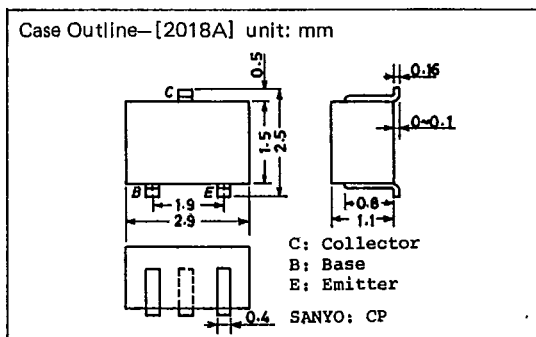




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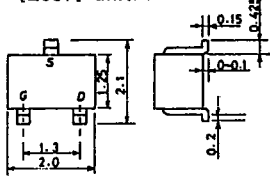
CASE OUTLINES OF SURFACE MOUNT TRANSISTORS

- 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.



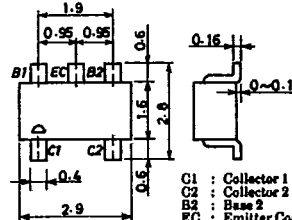
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Case Outline—[2057] unit: mm



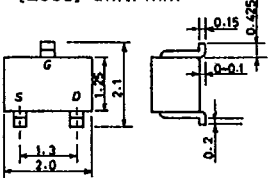
S: Source
G: Gate
D: Drain
SANYO: MCP

Case Outline—[2066] unit: mm



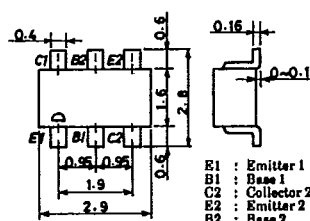
C1 : Collector 1
C2 : Collector 2
B2 : Base 2
EC : Emitter Common
B1 : Base 1
SANYO : CP6

Case Outline—[2058] unit: mm



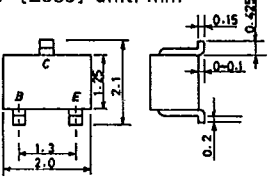
G: Gate
S: Source
D: Drain
SANYO: MCP

Case Outline—[2067] unit: mm



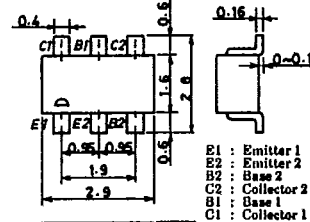
E1 : Emitter 1
B1 : Base 1
C2 : Collector 2
E2 : Emitter 2
B2 : Base 2
C1 : Collector 1
SANYO : CP6

Case Outline—[2059] unit: mm



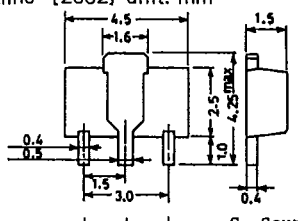
B: Base
C: Collector
E: Emitter
SANYO: MCP

Case Outline—[2068] unit: mm



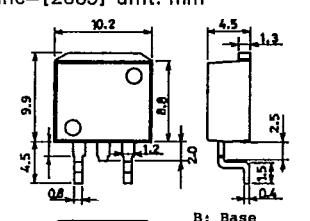
E1 : Emitter 1
E2 : Emitter 2
B2 : Base 2
C2 : Collector 2
B1 : Base 1
C1 : Collector 1
SANYO : CP6

Case Outline—[2062] unit: mm



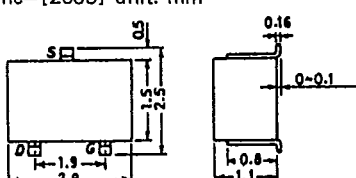
S: Source
D: Drain
G: Gate
SANYO: PCP

Case Outline—[2069] unit: mm



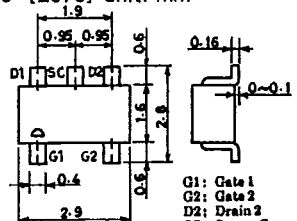
B: Base
C: Collector
E: Emitter
SANYO: SMP

Case Outline—[2065] unit: mm



S: Source
D: Drain
G: Gate
SANYO: CP

Case Outline—[2070] unit: mm



G1 : Gate 1
G2 : Gate 2
D2 : Drain 2
SC : Source Common
D1 : Drain 1
SANYO : CP6

T-9120

