

2SD1628

T-35-15

2038

NPN Epitaxial Planar Silicon Transistor

High-Current Switching Applications

©1781A

Applications

- Strobe DC-DC converters, relay drivers, hammer drivers, lamp drivers, motor drivers.

Features

- Low saturation voltage.
- High h_{FE} .
- Large current capacity.
- Very small size making it easy to provide high-density, small-sized hybrid IC's.

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

		unit
Collector to Base Voltage	V_{CB0}	60 V
Collector to Emitter Voltage	V_{CE0}	20 V
Emitter to Base Voltage	V_{EB0}	6 V
Collector Current	I_C	5 A
Peak Collector Current	i_{cp}	8 A
Collector Dissipation	P_C	500 mW
	$P_C(\text{Note})$	1.5 W
Junction Temperature	T_j	150 $^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150 $^\circ\text{C}$

(Note) Mounted on ceramic board (250mm² x 0.8mm)

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

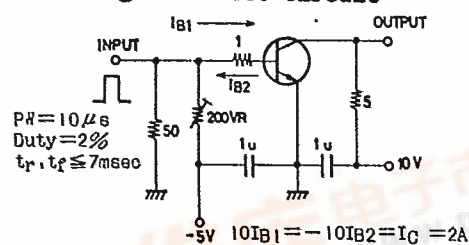
		min	typ	max	unit
Collector Cutoff Current	I_{CB0} $V_{CB}=50V, I_E=0$			100	nA
Emitter Cutoff Current	I_{EB0} $V_{EB}=5V, I_C=0$			100	nA
DC Current Gain	$h_{FE}(1)$ $V_{CE}=2V, I_C=0.5A$	120*		560*	
	$h_{FE}(2)$ $V_{CE}=2V, I_C=3A$	95			
Gain-Bandwidth Product	f_T $V_{CE}=10V, I_C=50mA$		120		MHz
Output Capacitance	c_{ob} $V_{CB}=10V, f=1MHz$		45		pF
C-E Saturation Voltage	$V_{CE(sat)}$ $I_C=3A, I_B=60mA$			500	mV
B-E Saturation Voltage	$V_{BE(sat)}$ $I_C=3A, I_B=60mA$			1.5	V
Turn-ON Time	t_{on} See specified Test Circuit.		30		ns
Storage Time	t_{stg} "		300		ns
Fall Time	t_f "		40		ns

* The 2SD1628 is classified by 0.5A h_{FE} as follows:

120	E	200	160	F	320	280	G	560
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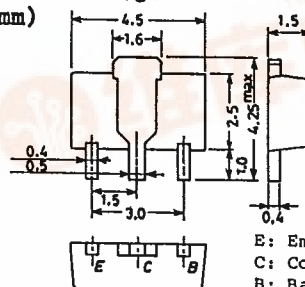
Marking :DK

Switching Time Test Circuit



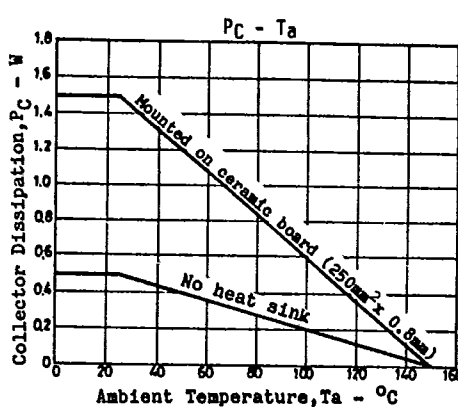
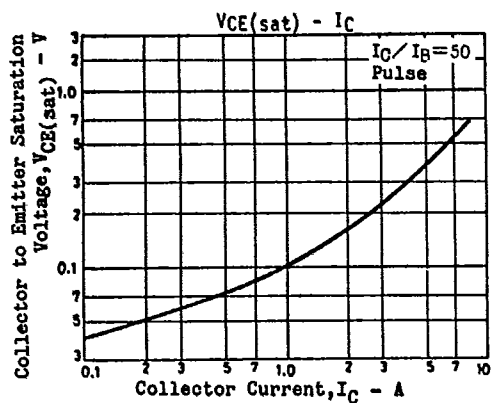
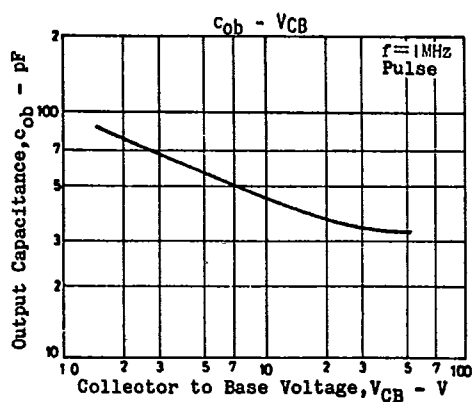
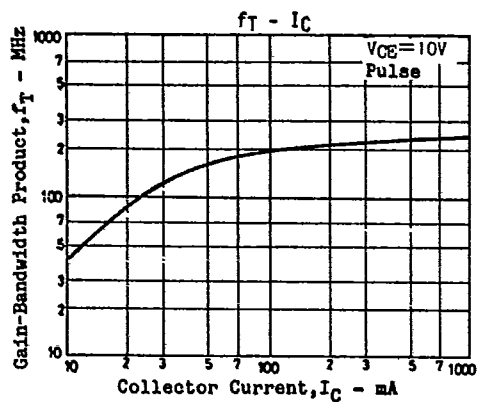
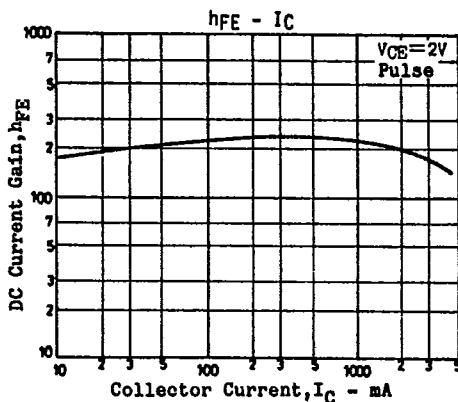
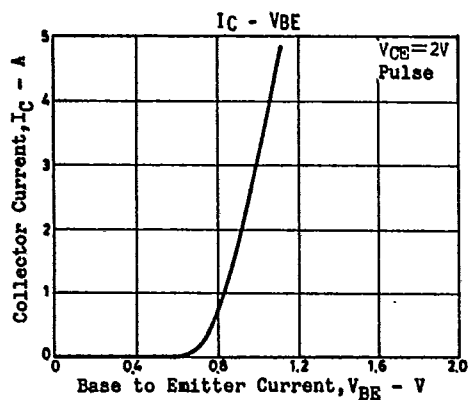
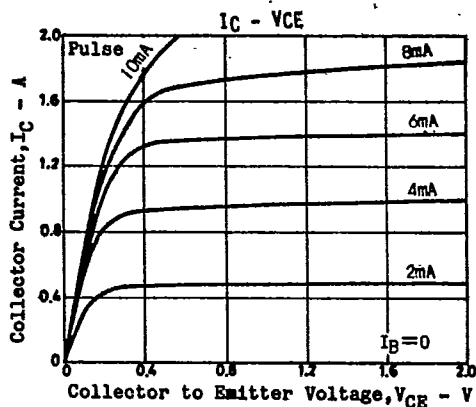
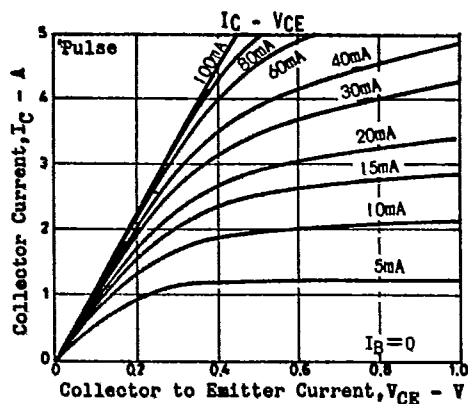
Case Outline 2038

(unit:mm)



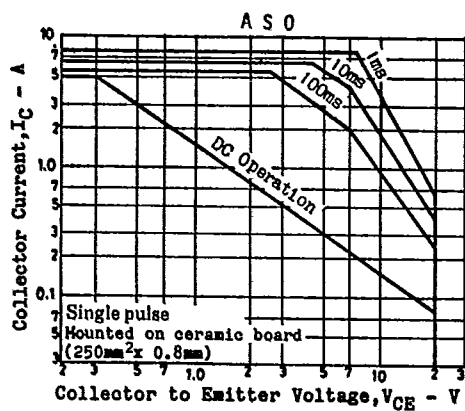
E: Emitter
C: Collector
B: Base

SANYO: PCP



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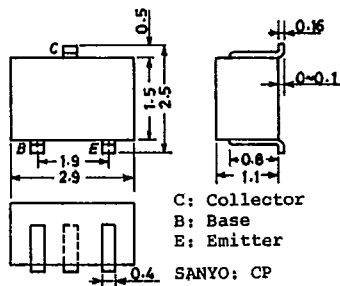


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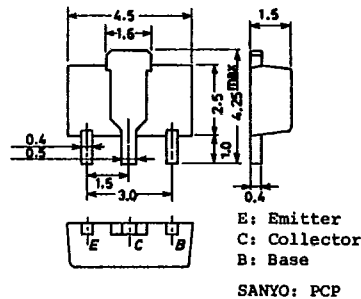
CASE OUTLINES OF SURFACE MOUNT TRANSISTORS

- 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.

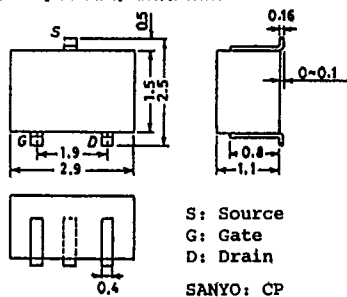
Case Outline—[2018A] unit: mm



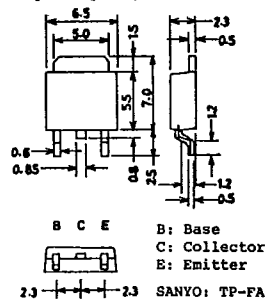
Case Outline—[2038] unit: mm



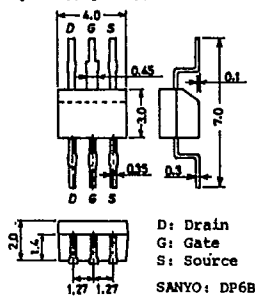
Case Outline—[2024A] unit: mm



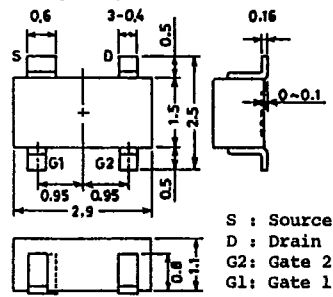
Case Outline—[2044] unit: mm



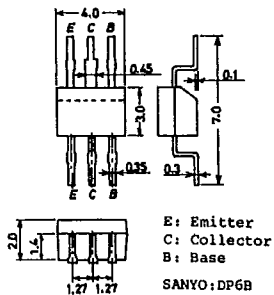
Case Outline—[2028A] unit: mm



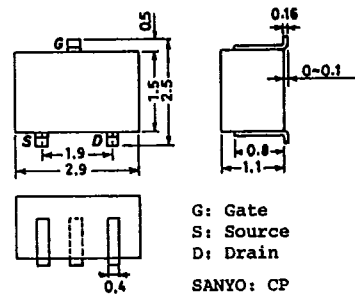
Case Outline—[2046] unit: mm



Case Outline—[2030A] unit: mm

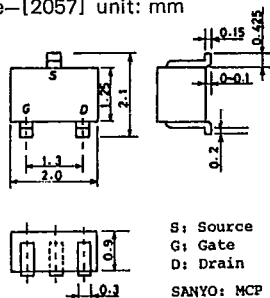


Case Outline—[2050] unit: mm

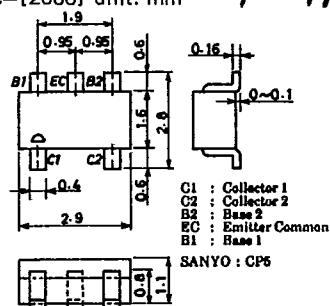


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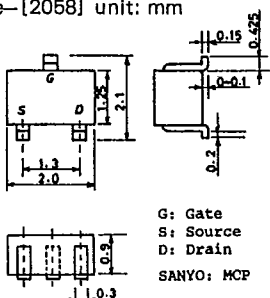
Case Outline—[2057] unit: mm



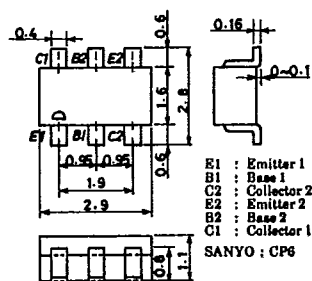
Case Outline—[2066] unit: mm



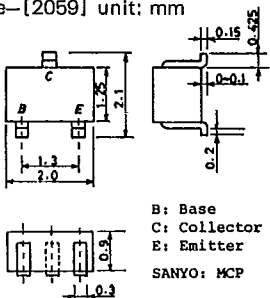
Case Outline—[2058] unit: mm



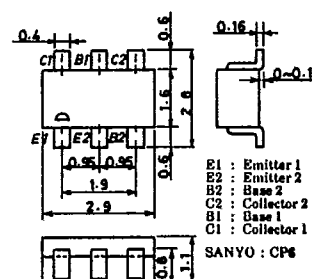
Case Outline—[2067] unit: mm



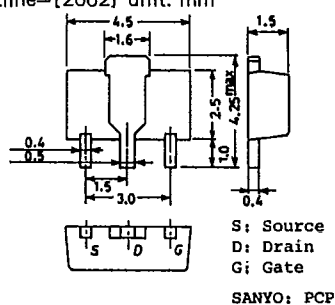
Case Outline—[2059] unit: mm



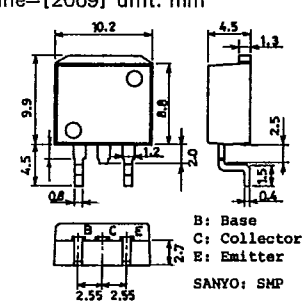
Case Outline—[2068] unit: mm



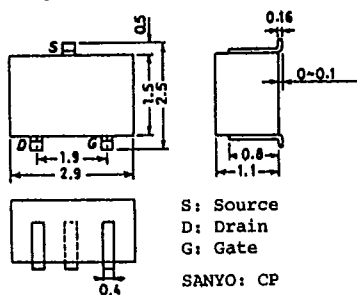
Case Outline—[2062] unit: mm



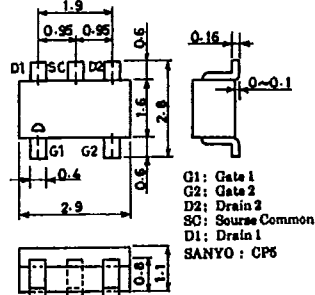
Case Outline—[2069] unit: mm



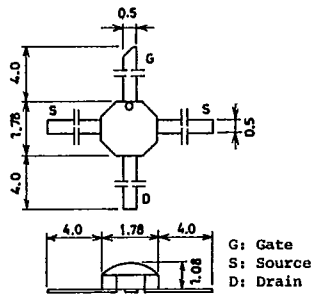
Case Outline—[2065] unit: mm



Case Outline—[2070] unit: mm

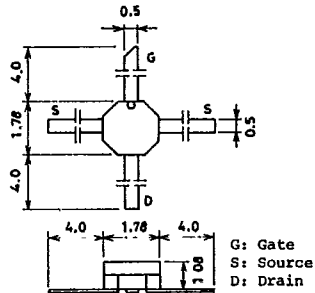


Case Outline-[2071] unit: mm



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Case Outline-[2072] unit: mm



Case Outline-[2073] unit: mm

