

**2SA1552,
2SC4027**

2044

PNP/NPN Epitaxial Planar
Silicon TransistorsT-33-17
T-33-01**High-Voltage Switching Applications**

©2262B

Applications

- Converters, inverters, color TV audio output

Features

- Adoption of FBET, MBET processes
- High voltage and large current capacity
- Fast switching time
- Small and slim package permitting 2SA1552/2SC4027-applied sets to be made more compact

(): 2SA1552

Absolute Maximum Ratings at Ta=25°C

			unit
Collector to Base Voltage	V _{CB0}	(-)180	V
Collector to Emitter Voltage	V _{CEO}	(-)160	V
Emitter to Base Voltage	V _{EB0}	(-)6	V
Collector Current	I _C	(-)1.5	A
Peak Collector Current	i _{cp}	(-)2.5	A
Collector Dissipation	P _C	1	W
	P _C	15	W
	T _j	150	°C
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55 to +150	°C

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

			min	typ	max	unit
Collector Cutoff Current	I _{CB0}	V _{CB} =(-)120V, I _E =0			(-)1.0	uA
Emitter Cutoff Current	I _{EB0}	V _{EB} =(-)4V, I _C =0			(-)1.0	uA
DC Current Gain	h _{FE} (1)	V _{CE} =(-)5V, I _C =(-)100mA	100*		400*	
	h _{FE} (2)	V _{CE} =(-)5V, I _C =(-)10mA	80			
Gain-Bandwidth Product	f _T	V _{CE} =(-)10V, I _C =(-)50mA		120		MHz
Output Capacitance	c _{ob}	V _{CB} =(-)10V, f=1MHz		(22)12		pF

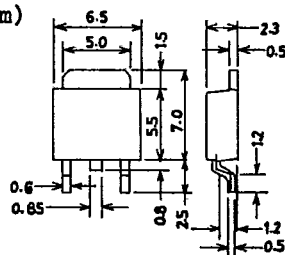
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*: The 2SA1552/2SC4027 are classified by 100mA h_{FE} as follows:

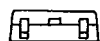
100	R	200	140	S	280	200	T	400
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Case Outline 2044

(unit:mm)



B C E

B: Base
C: Collector
E: Emitter

2.3 2.3 SANYO: TP-FA

2SA1552/2SC4027

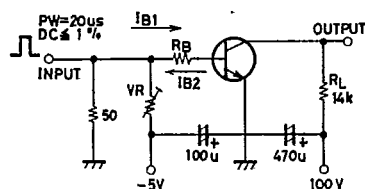
T-33-17

T-33-07

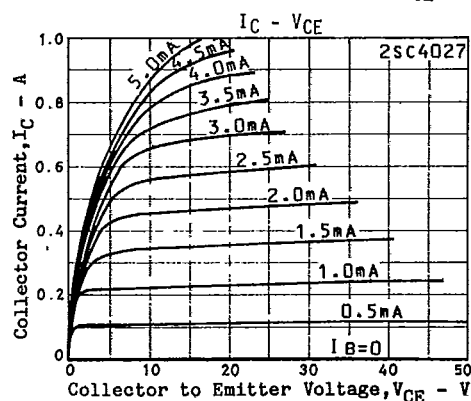
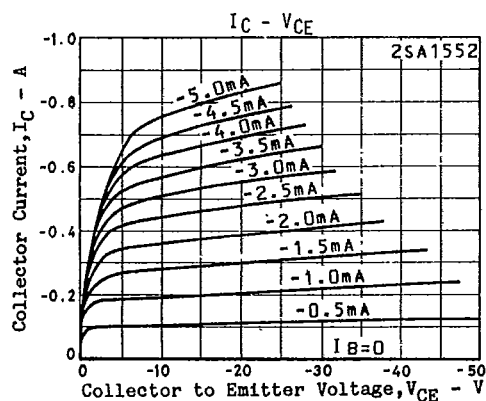
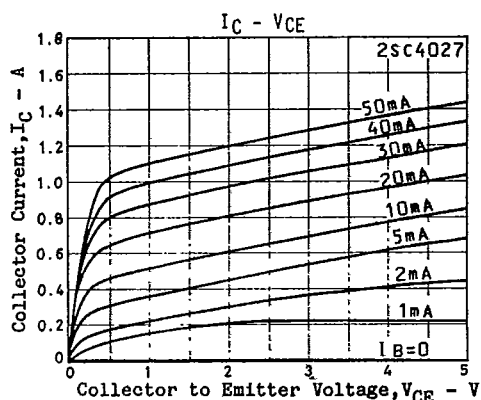
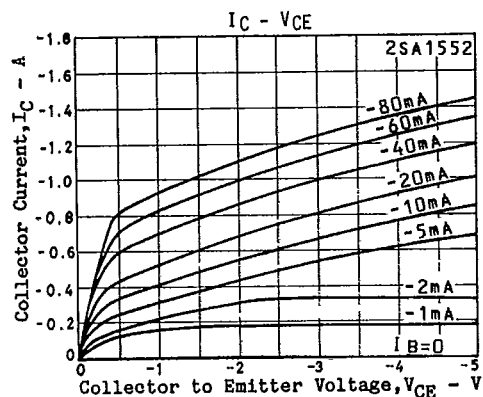
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			min	typ	max	unit
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)500mA, I_B=(-)50mA$		(-0.2)(-0.5)		V
			0.13	0.45		
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)500mA, I_B=(-)50mA$		(-)0.85(-)1.2		V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)10\mu A, I_E=0$		(-)180		V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)1mA, R_{BE}=\infty$		(-)160		V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E=(-)10\mu A, I_C=0$		(-)6		V
Turn-on Time	t_{on}	See specified Test Circuit.		60		ns
Storage Time	t_{stg}			(0.7)1.2		us
Fall Time	t_f			(50)80		ns

Switching Time Test Circuit



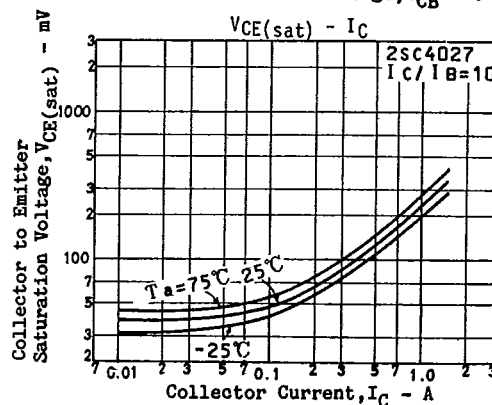
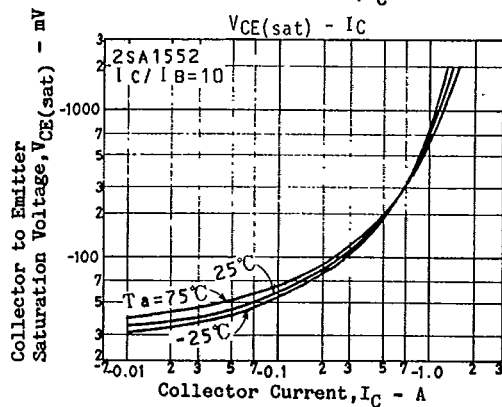
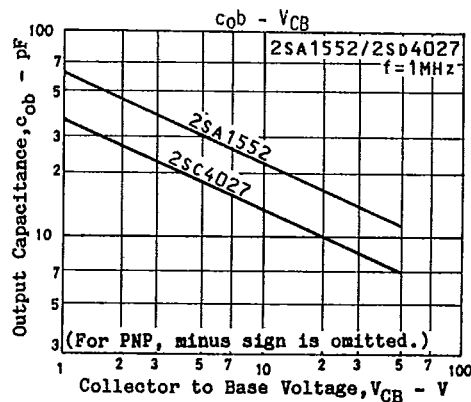
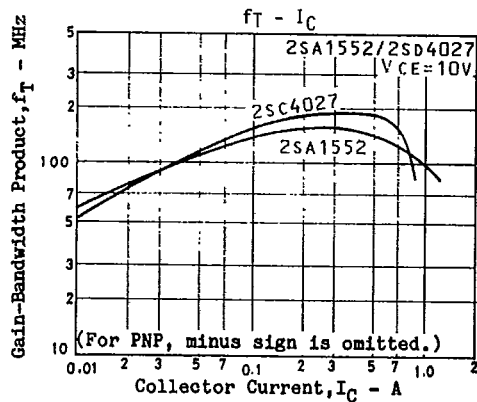
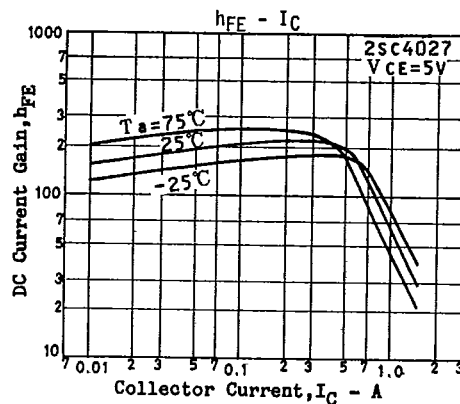
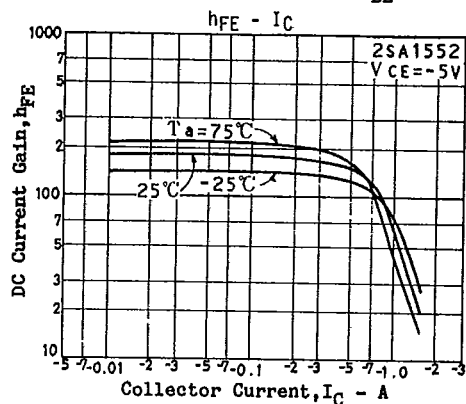
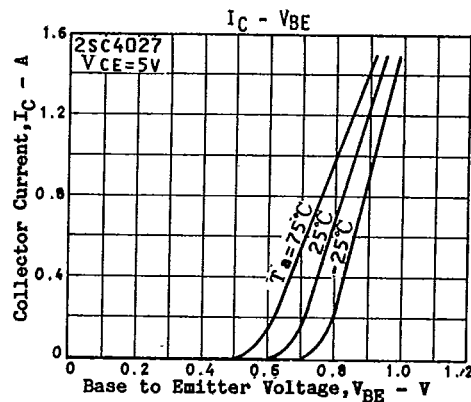
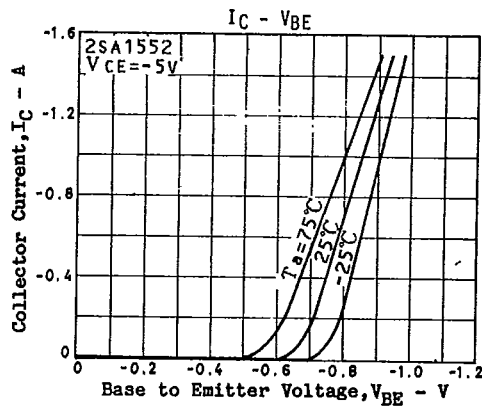
$10I_{B1} = -10I_{B2} = I_C = 0.7A$
For PNP, the polarity is reversed.



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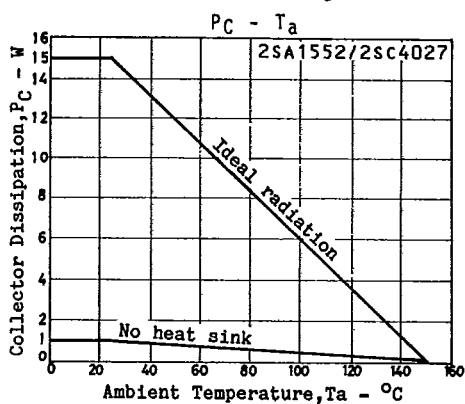
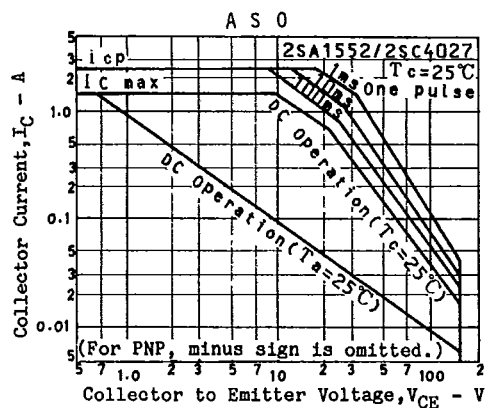
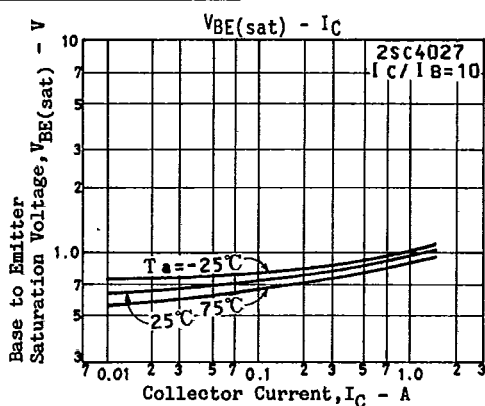
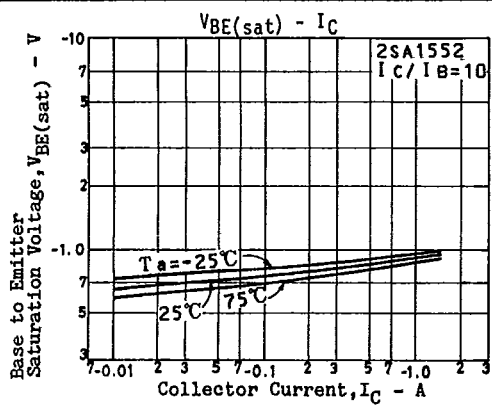
T-33-07



T-33-17

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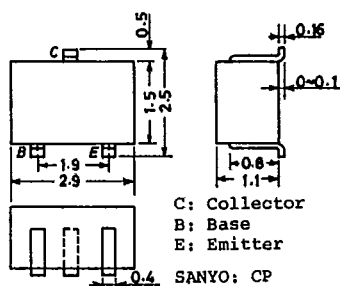


T-91-20

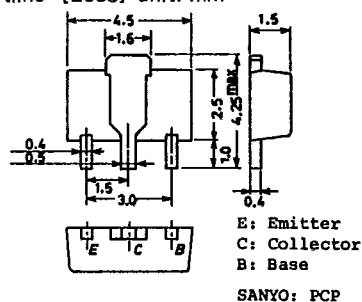
CASE OUTLINES OF SURFACE MOUNT TRANSISTORS

- 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.

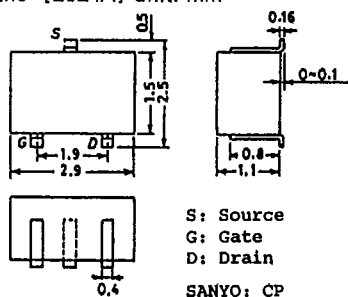
Case Outline—[2018A] unit: mm



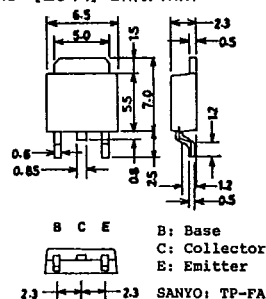
Case Outline—[2038] unit: mm



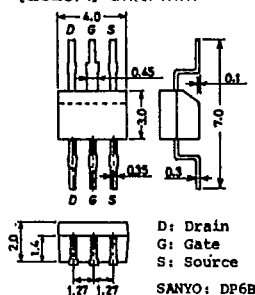
Case Outline—[2024A] unit: mm



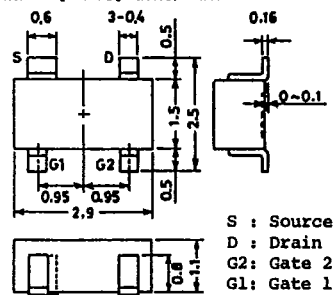
Case Outline—[2044] unit: mm



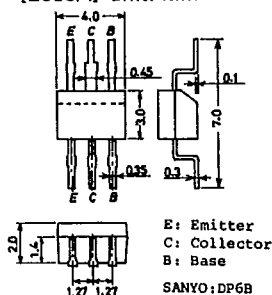
Case Outline—[2028A] unit: mm



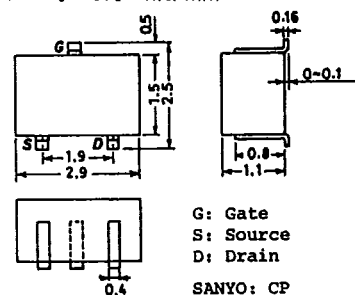
Case Outline—[2046] unit: mm



Case Outline—[2030A] unit: mm

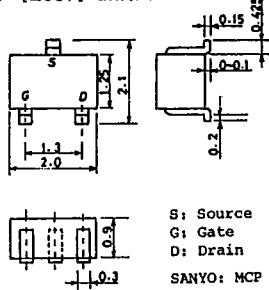


Case Outline—[2050] unit: mm

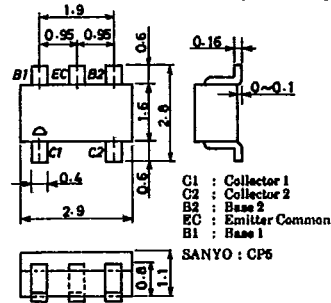


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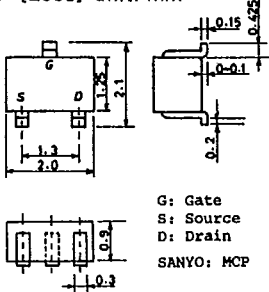
Case Outline—[2057] unit: mm



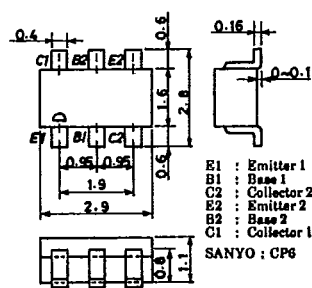
Case Outline—[2066] unit: mm



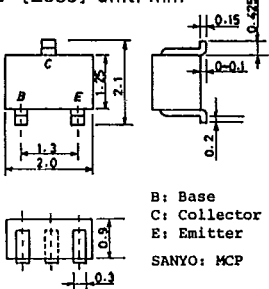
Case Outline—[2058] unit: mm



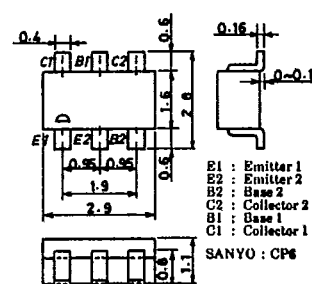
Case Outline—[2067] unit: mm



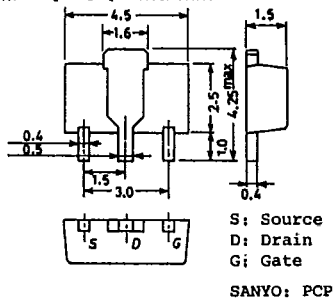
Case Outline—[2059] unit: mm



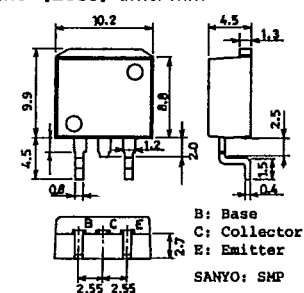
Case Outline—[2068] unit: mm



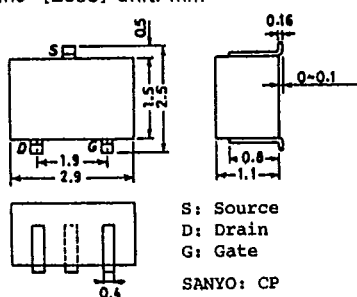
Case Outline—[2062] unit: mm



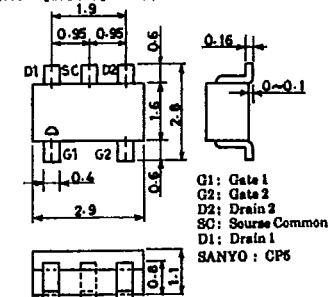
Case Outline—[2069] unit: mm



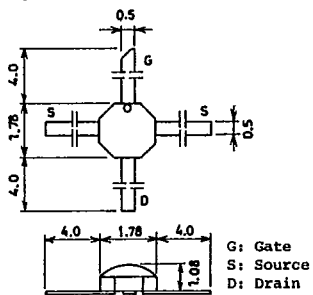
Case Outline—[2065] unit: mm



Case Outline—[2070] unit: mm

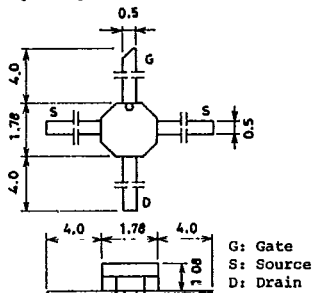


Case Outline—[2071] unit: mm



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Case Outline—[2072] unit: mm



Case Outline—[2073] unit: mm

