



No.2262B

2SA1552/2SC4027

PNP/NPN Epitaxial Planar Silicon Transistors

High-Voltage Switching Applications

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_{EBO}	(-)6	V
Collector Current	I_C	(-)1.5	A
Collector Current(Pulse)	I_{CP}	(-)2.5	A
Collector Dissipation	P_C	1	W
	P_C	15	W
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55 to +150	°C

$T_c=25^\circ C$

Electrical Characteristics at Ta=25°C

			min	typ	max	unit
Collector Cutoff Current	I_{CB0}	$V_{CB}=(-)120V, I_E=0$			(-)1.0	µA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=(-)4V, I_C=0$			(-)1.0	µA
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

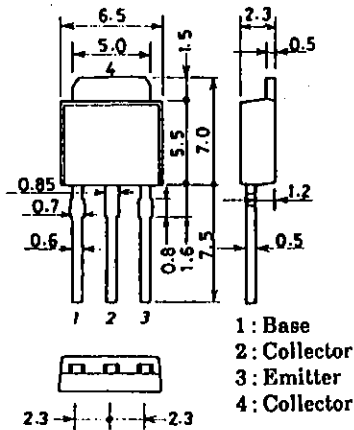
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*: The 2SA1552/2SC4027 are classified by 100mA h_{FE} as follows:

100 R	200	140 S	280	200 T	400
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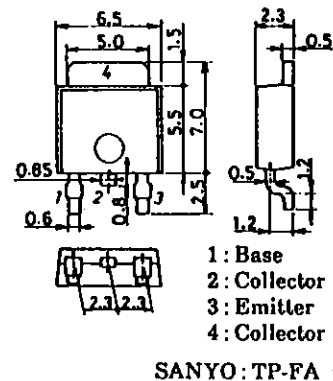
Package Dimensions 2045B

(unit: mm)



Package Dimensions 2044B

(unit: mm)



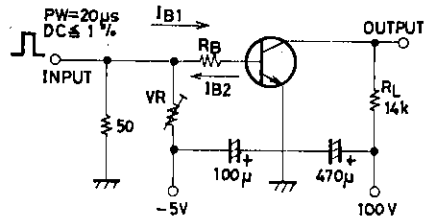
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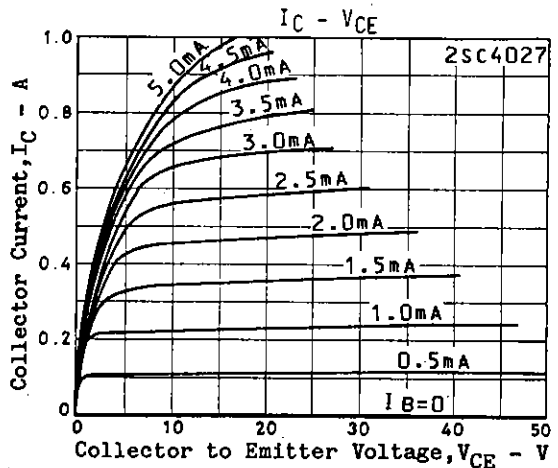
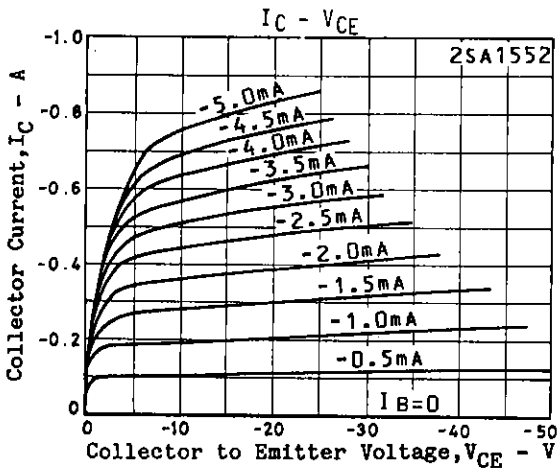
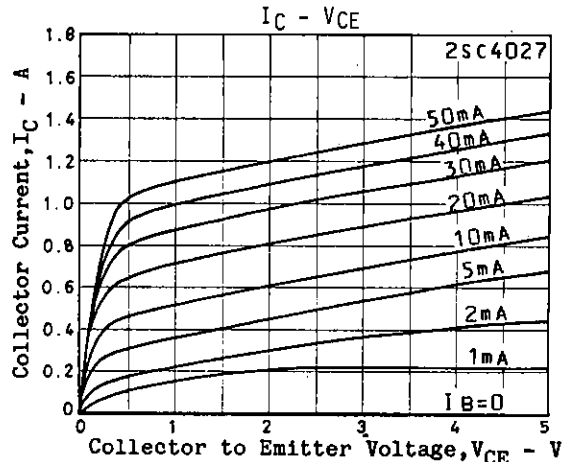
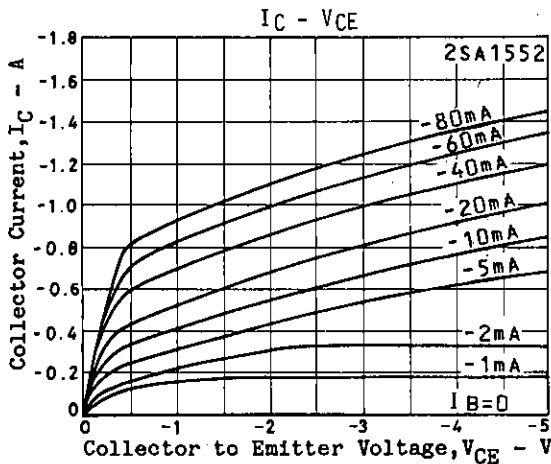
			min	typ	max	unit
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)500mA, I_B=(-)50mA$	(-0.2)	(-0.5)		V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)500mA, I_B=(-)50mA$	(-)0.85	(-)1.2		V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)10\mu A, I_E=0$	(-)180			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)1mA, R_{BE}=\infty$	(-)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		μs
Fall Time	t_f	"	(50)	80		ns

Switching Time Test Circuit

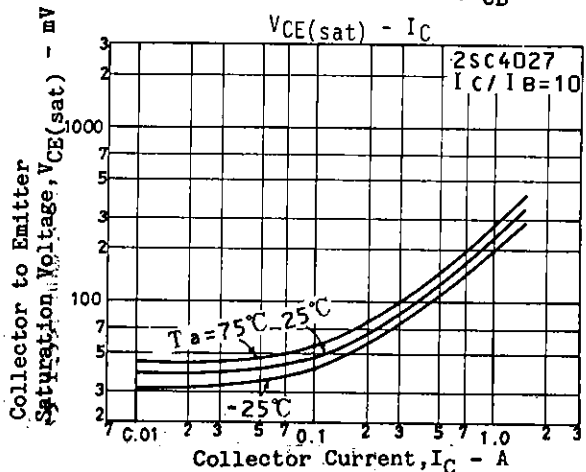
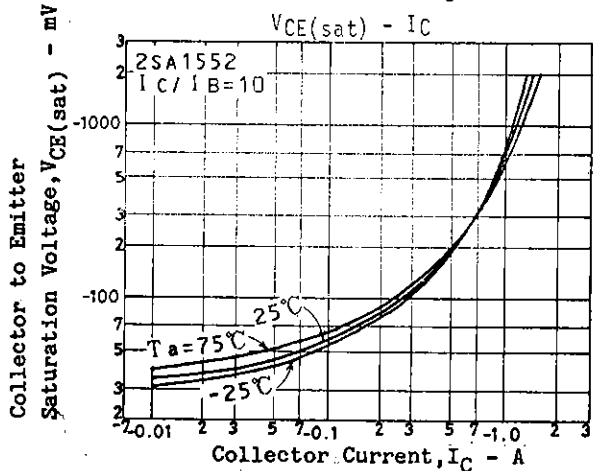
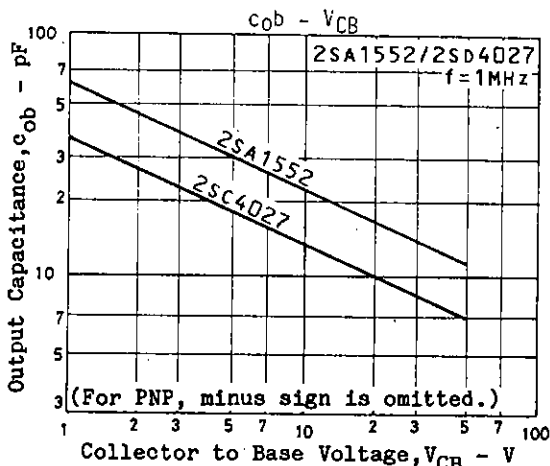
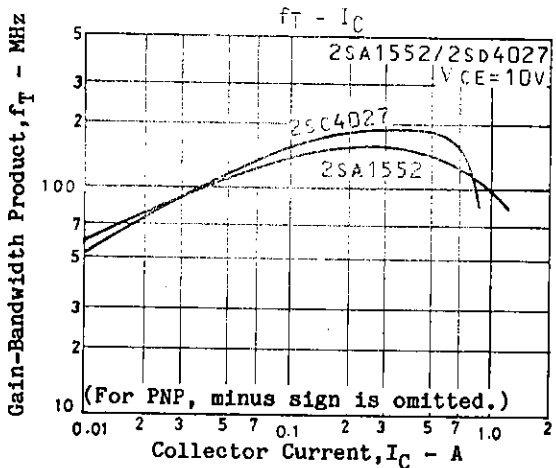
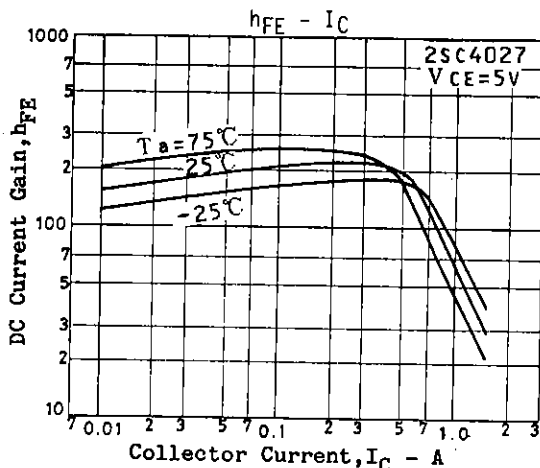
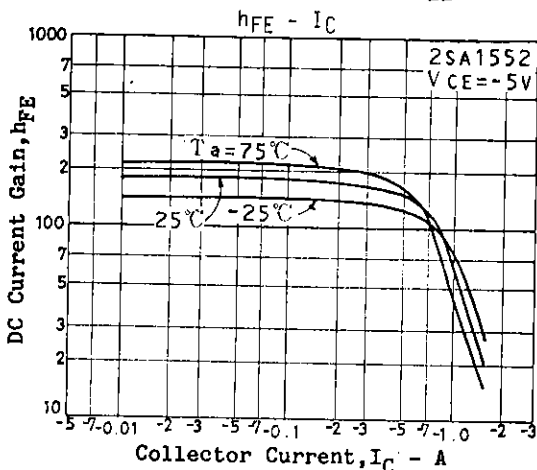
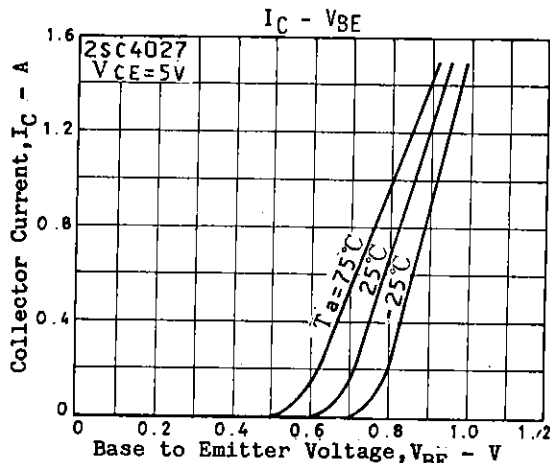
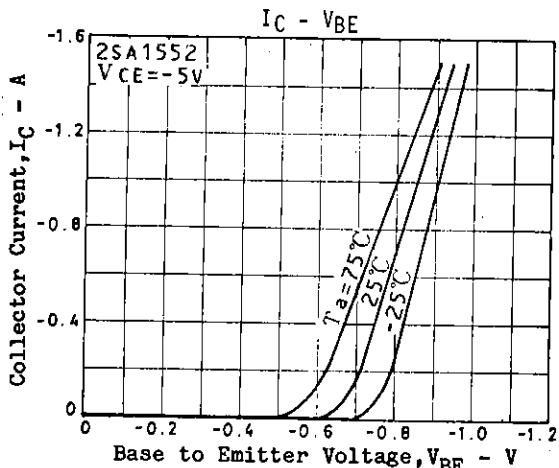


$10|I_{B1}| = -10|I_{B2}| = I_C = 0.7A$
For PNP, the polarity is reversed.

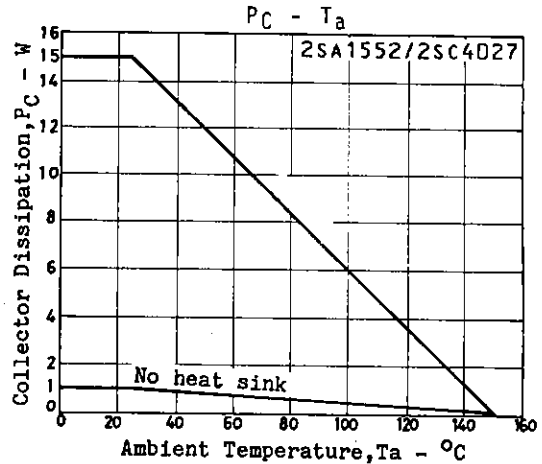
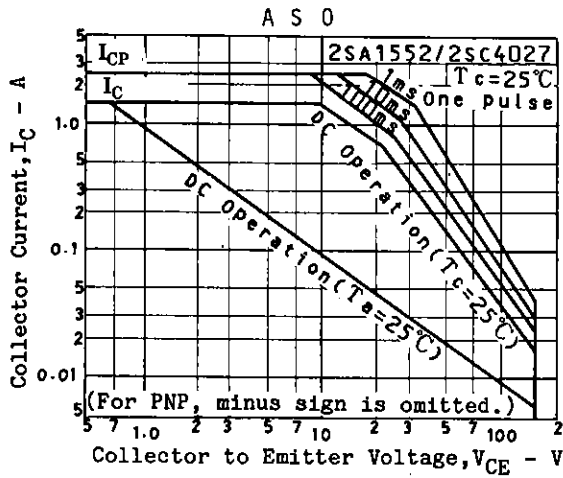
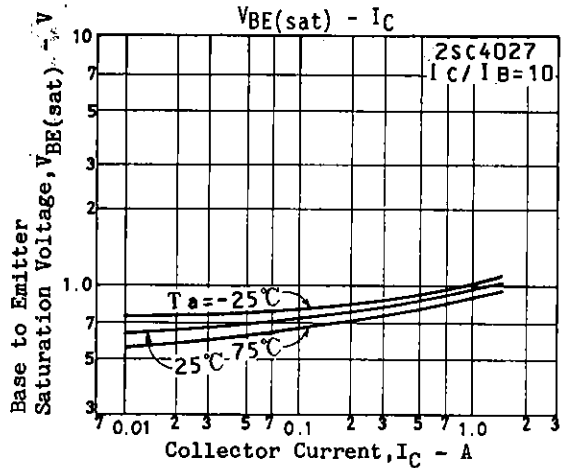
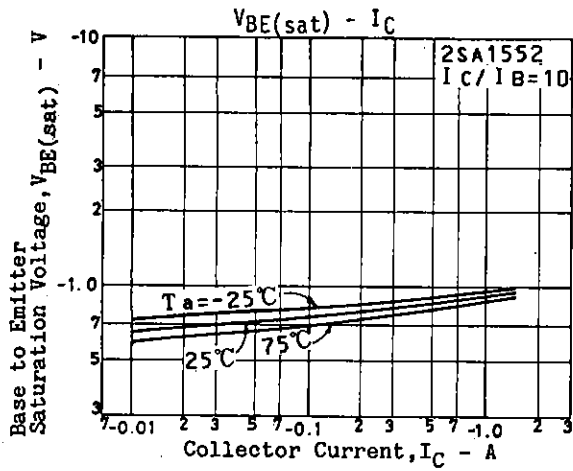
Unit (Resistance : Ω , Capacitance : F)



2SA1552/2SC4027



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