



SANYO Semiconductors

DATA SHEET

2SA1552 / 2SC4027 — PNP / NPN Epitaxial Planar Silicon Transistors

High-Voltage Switching Applications

Applications

- Converters, inverters, color TV audio output.

Features

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

Specifications () : 2SA1552

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	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
		T _c =25°C	15	W
Junction Temperature	T _J		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I _{CBO}	V _{CB} =(-)120V, I _E =0A			(-)1.0	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} =(-)4V, I _C =0A			(-)1.0	μA
DC Current Gain	h _{FE1}	V _{CE} =(-)5V, I _C =(-)100mA	100*		400*	
	h _{FE2}	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

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

Continued on next page.

Rank	R	S	T
h _{FE}	100 to 200	140 to 280	200 to 400

■ Any and all SANYO products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, or other applications whose failure can be reasonably expected to result in serious physical and/or material damage. Consult with your SANYO representative nearest you before using any SANYO products described or contained herein in such applications.

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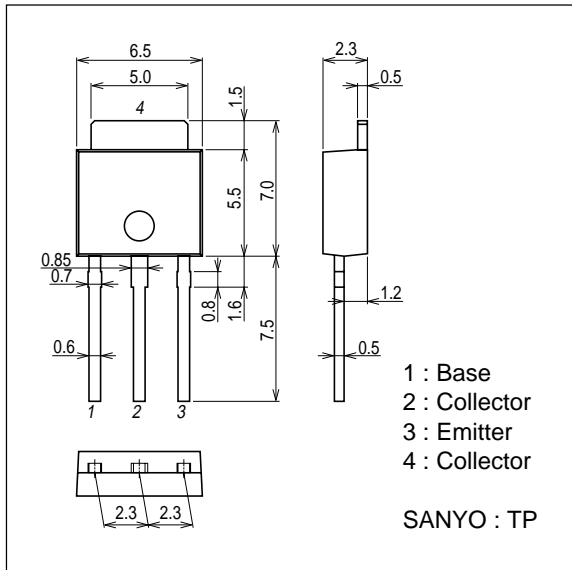
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)500mA, I_B=(-)50mA$		(-0.2)0.13	(-0.5)0.45	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)500mA, I_B=(-)50mA$		(-)0.85	(-)1.2	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)10\mu A, I_E=0A$	(-)180			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)1mA, R_{BE}=\infty$	(-)160			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=(-)10\mu A, I_C=0A$	(-)6			V
Turn-On Time	t_{on}	See specified Test Circuit.		60		ns
Storage Time	t_{stg}	See specified Test Circuit.		(0.7)1.2		μs
Fall Time	t_f	See specified Test Circuit.		(50)80		ns

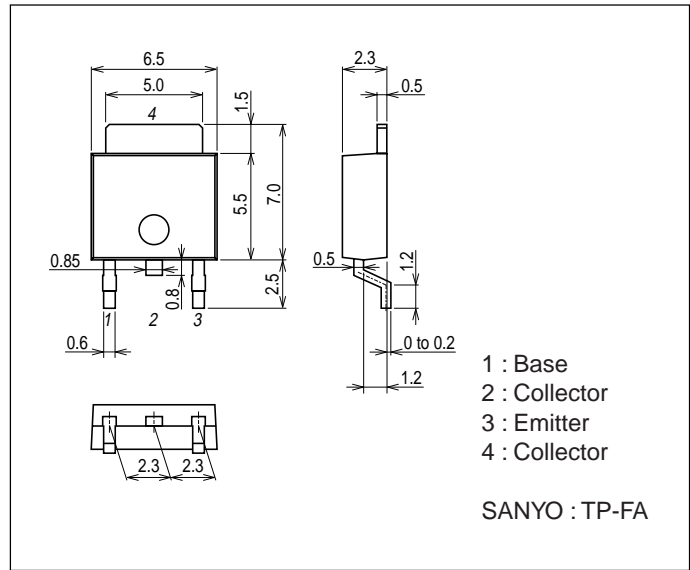
Package Dimensions

unit : mm
7518-003

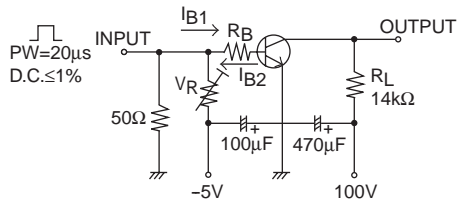


Package Dimensions

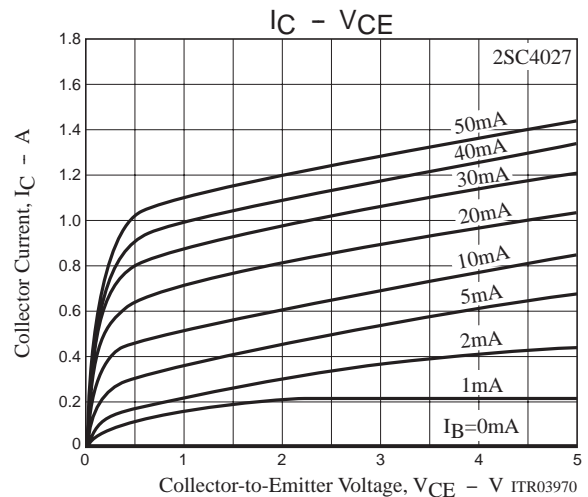
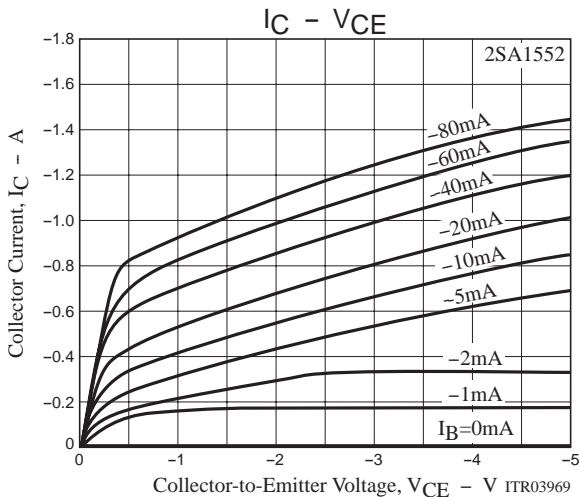
unit : mm
7003-003



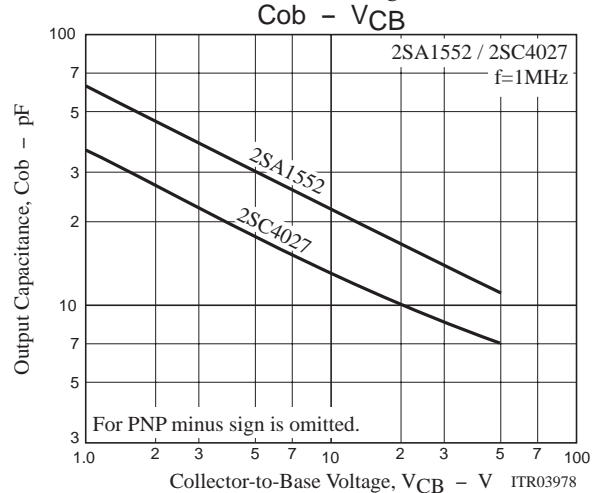
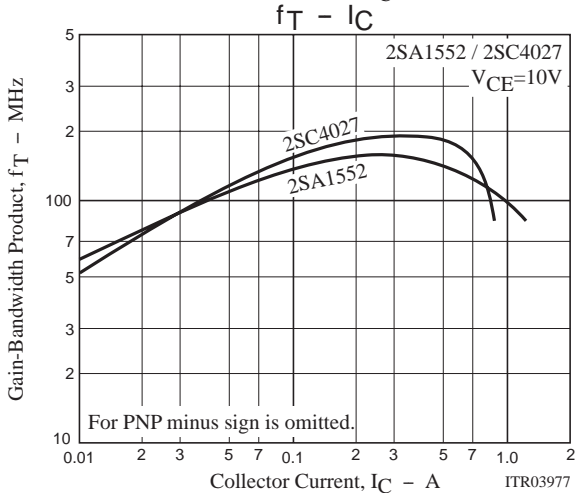
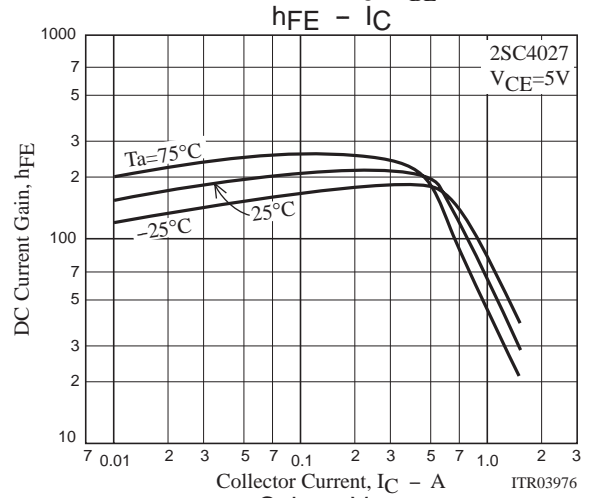
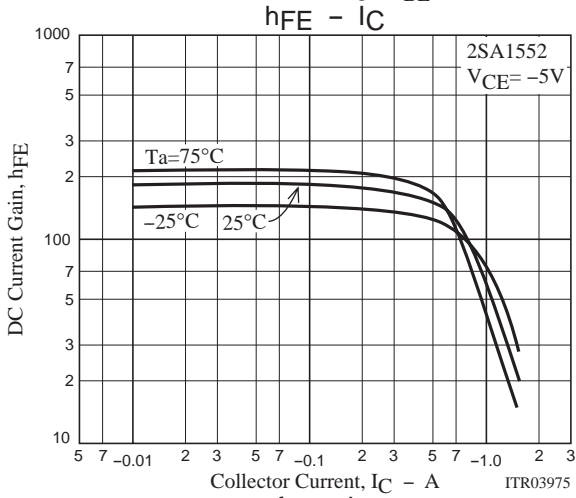
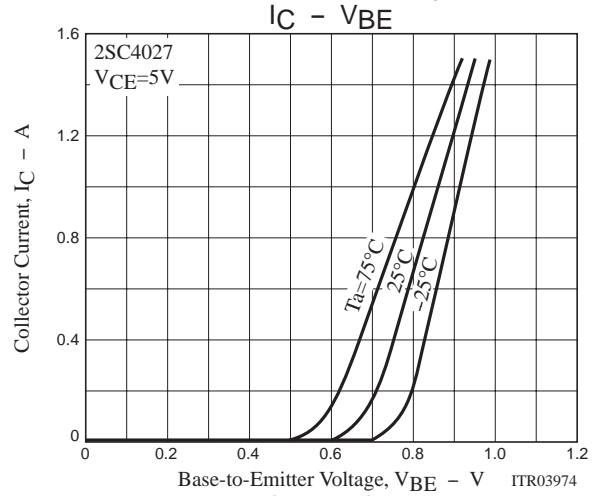
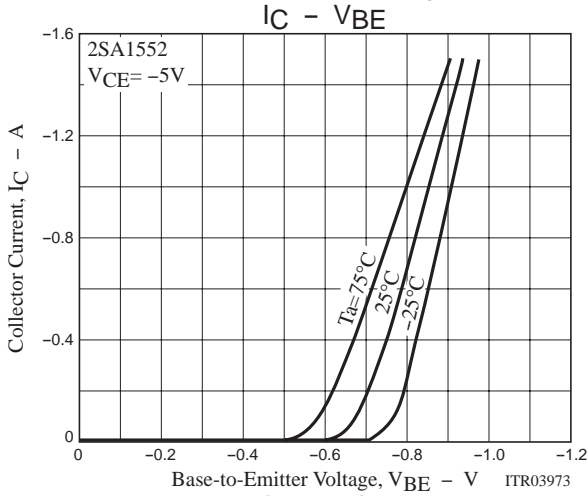
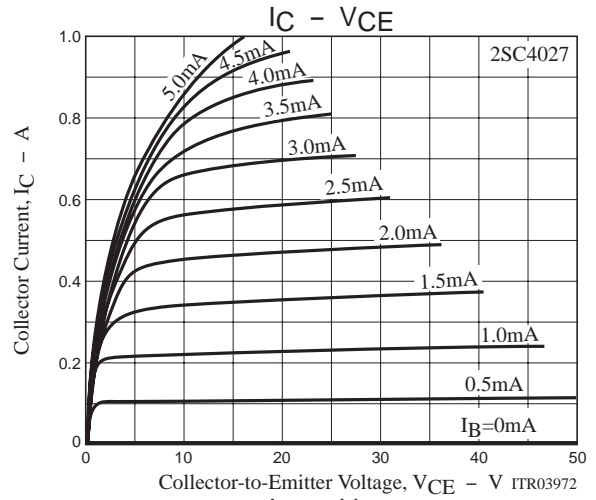
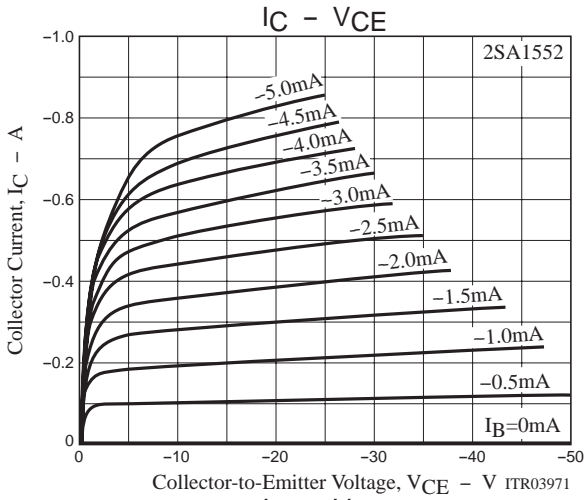
Switching Time Test Circuit



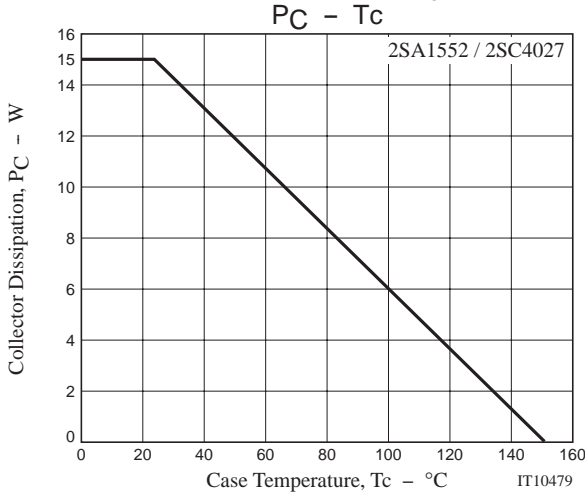
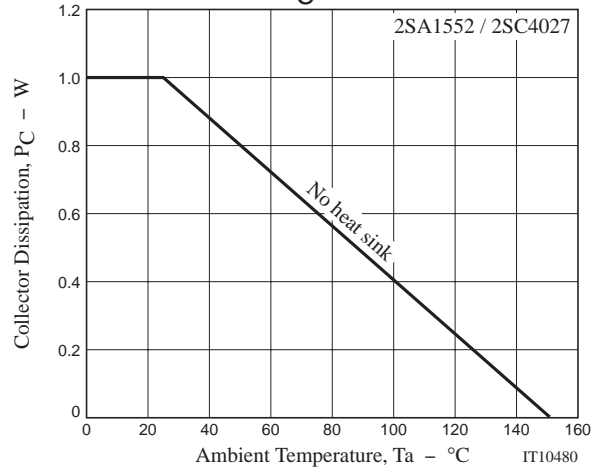
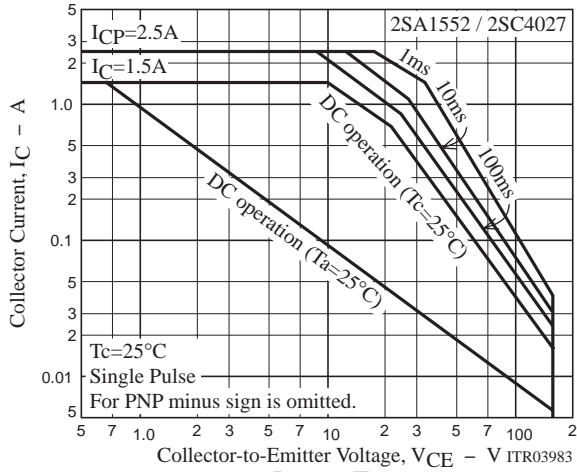
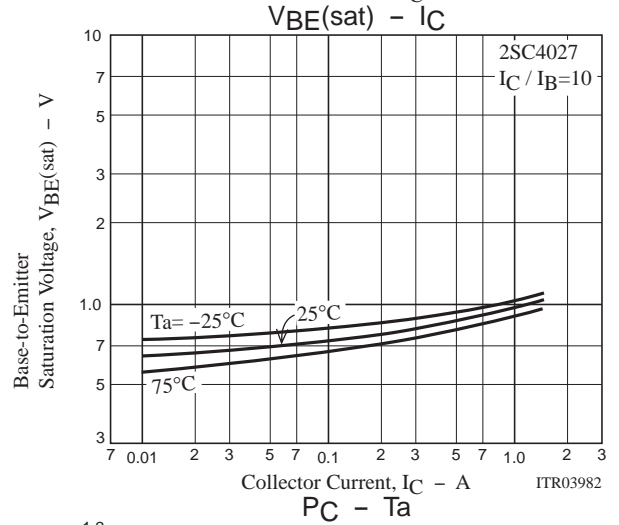
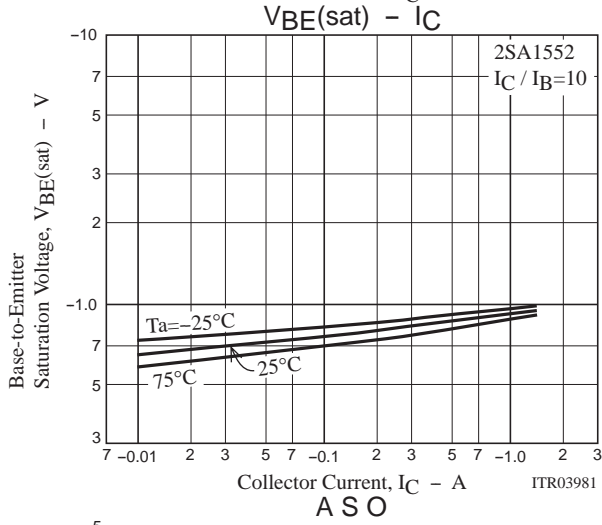
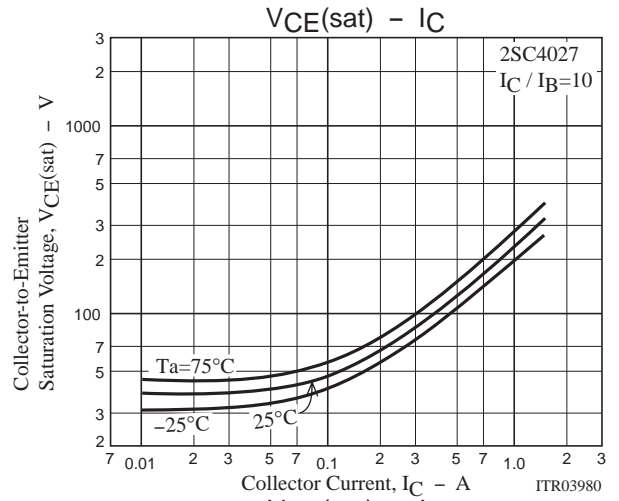
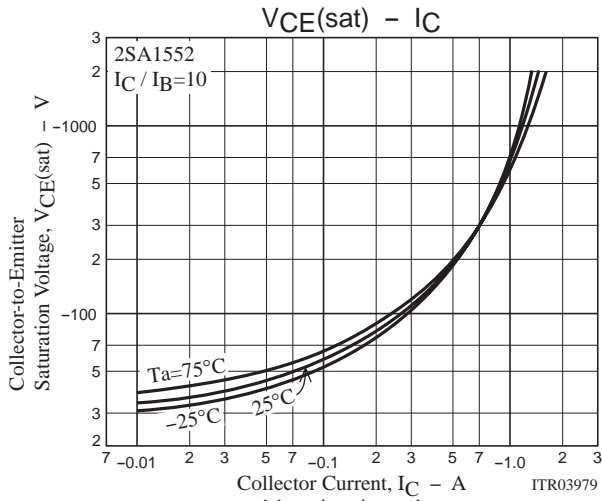
$10I_{B1} = -10I_{B2} = I_C = 0.7A$
 For PNP, the polarity is reversed.



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