

Ordering number : ENN8357



SANYO Semiconductors

DATA SHEET

2SA2168

 — PNP Epitaxial Planar Silicon Transistor

High-Voltage Switching Applications

Features

- Adoption of MBIT process.
- High breakdown voltage and large current capacity.

Specifications

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		1.5	W
Junction Temperature	T _J		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

Electrical Characteristics at Ta=25°C

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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I _{CB0}	V _{CB} =-120V, I _E =0A			-1	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} =-4V, I _C =0A			-1	μA
DC Current Gain	h _{FE1}	V _{CE} =-5V, I _C =-100mA	140*		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		pF
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =-500mA, I _B =-50mA		-200	-500	mV
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)CB0}	I _C =-10μA, I _E =0A	-180			V
Collector-to-Emitter Breakdown Voltage	V _{(BR)CEO}	I _C =-1mA, R _{BE} =∞	-160			V
Emitter-to-Base Breakdown Voltage	V _{(BR)EBO}	I _E =-10μA, I _C =0A	-6			V
Turn-ON Time	t _{on}	See specified Test Circuit.		40		ns
Storage Time	t _{stg}	See specified Test Circuit.		0.7		μs
Fall Time	t _f	See specified Test Circuit.		40		ns

* ; The 2SA2168 is classified by 100mA h_{FE} as follows :

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

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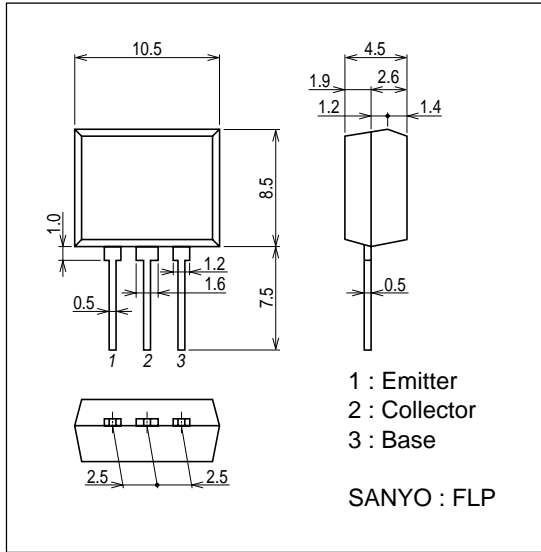
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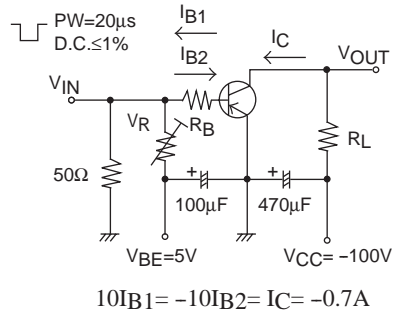
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Package Dimensions

unit : mm
7514-003



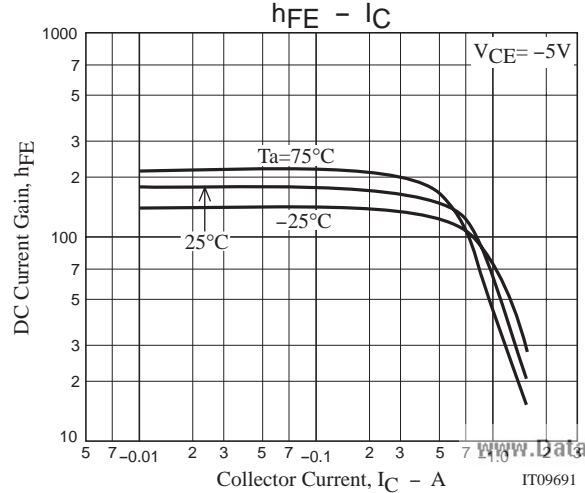
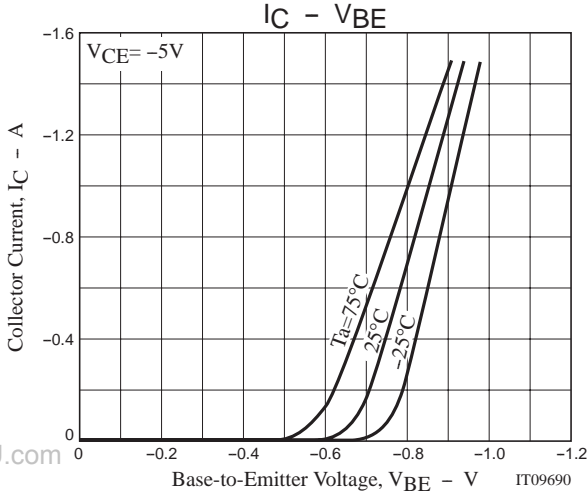
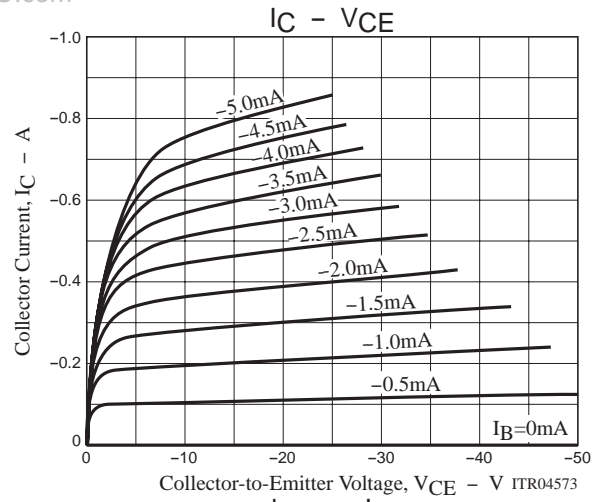
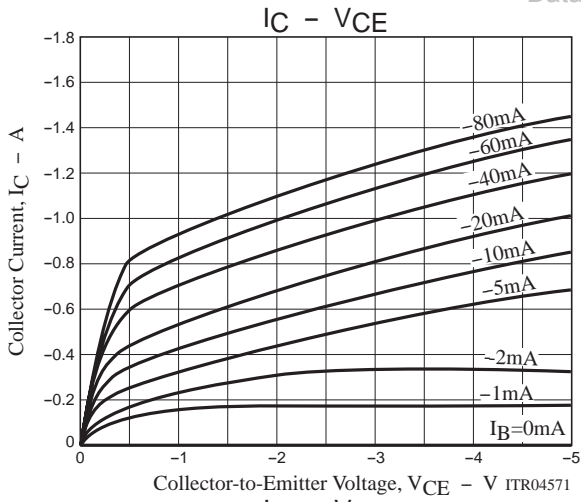
Switching Time Test Circuit



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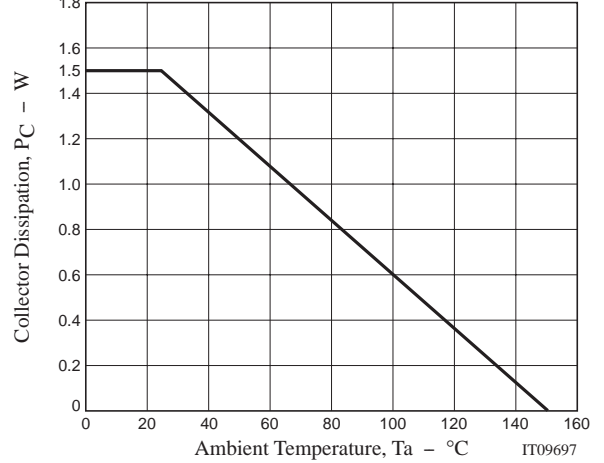
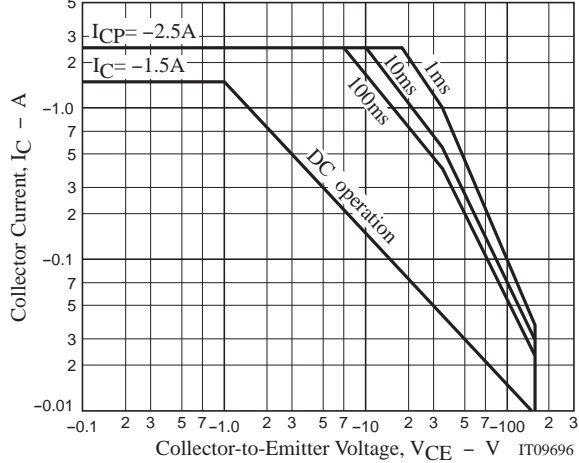
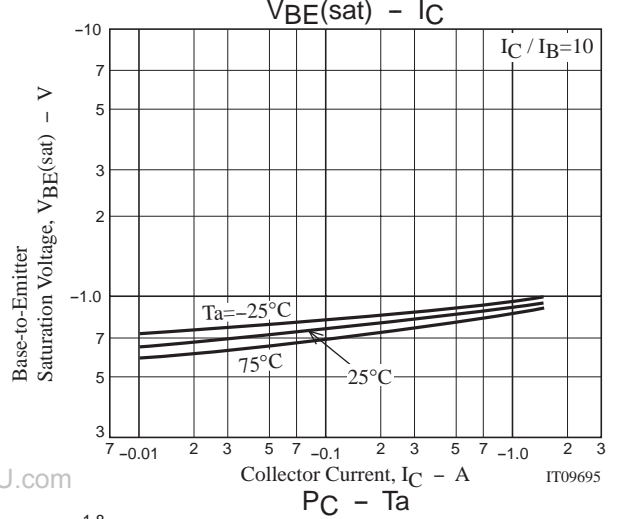
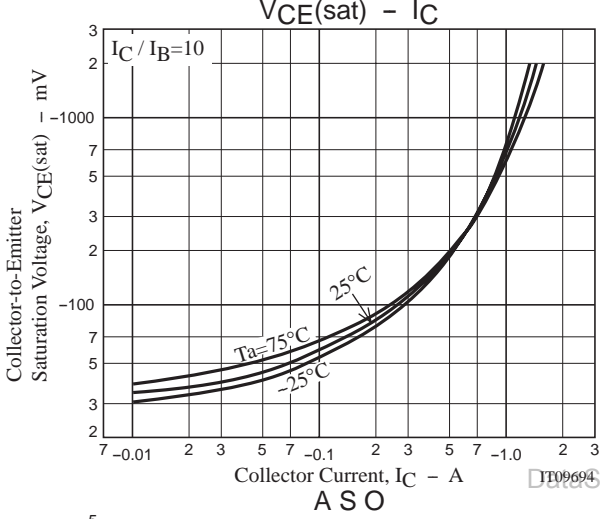
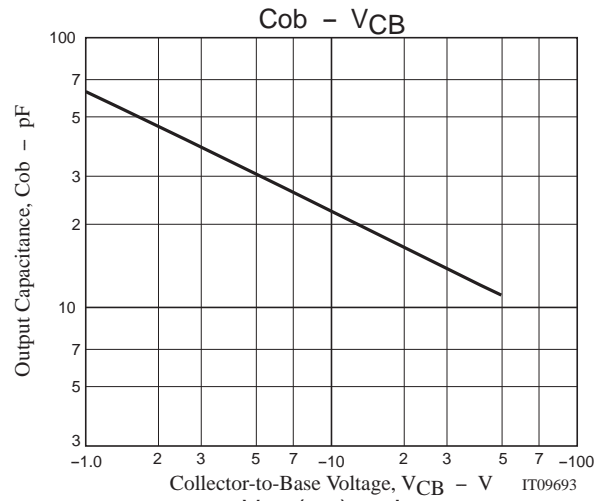
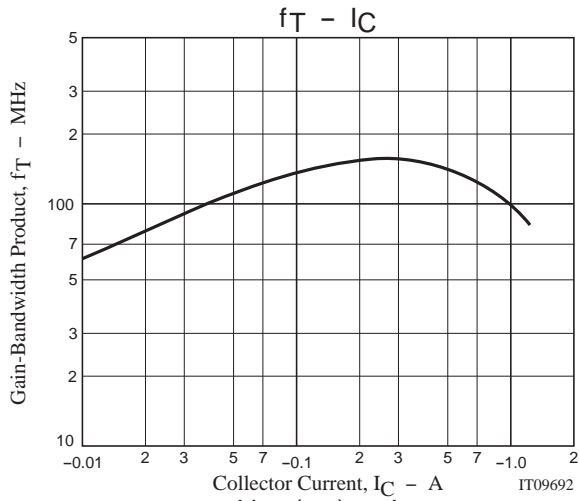
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