



SANYO Semiconductors

DATA SHEET

2SC6071

 — NPN Epitaxial Planar Silicon Transistor
High-Current Switching Applications

Applications

- Relay drivers, lamp drivers, motor drivers.

Features

- Adoption of MBIT process.
- Large current capacitance.
- Low collector-to-emitter saturation voltage.
- High-speed switching.

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CB0}		120	V
Collector-to-Emitter Voltage	V _{CES}		120	V
Collector-to-Emitter Voltage	V _{CEO}		50	V
Emitter-to-Base Voltage	V _{EBO}		8	V
Collector Current	I _C		10	A
Collector Current (Pulse)	I _{CP}	PW≤100μs	13	A
Base Current	I _B		2	A
Collector Dissipation	P _C		0.95	W
		T _c =25°C	20	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 _{CB0}	V _{CB} =40V, I _E =0A			10	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} =4V, I _C =0A			10	μA
DC Current Gain	h _{FE}	V _{CE} =2V, I _C =1A	200		700	
Gain-Bandwidth Product	f _T	V _{CE} =5V, I _C =1A		200		MHz
Output Capacitance	C _{ob}	V _{CB} =10V, f=1MHz		60		pF
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =5A, I _B =250mA		180	360	mV
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C =5A, I _B =250mA		0.93	1.4	V

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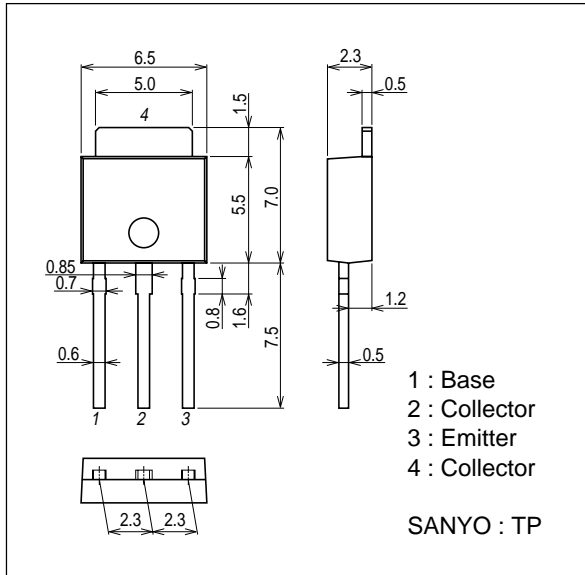
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0A$	120			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CES}$	$I_C=100\mu A, R_{BE}=0\Omega$	120			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1mA, R_{BE}=\infty$	50			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=100\mu A, I_C=0A$	8			V
Turn-On Time	t_{on}	See specified Test Circuit.		40		ns
Storage Time	t_{stg}	See specified Test Circuit.		1000		ns
Fall Time	t_f	See specified Test Circuit.		80		ns

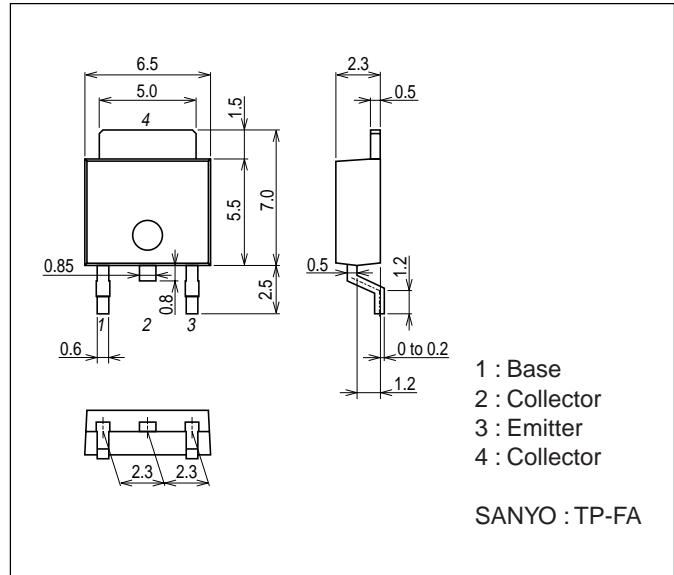
Package Dimensions

unit : mm
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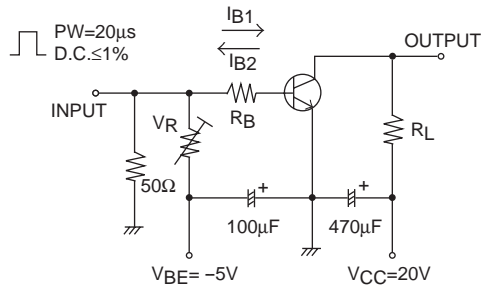


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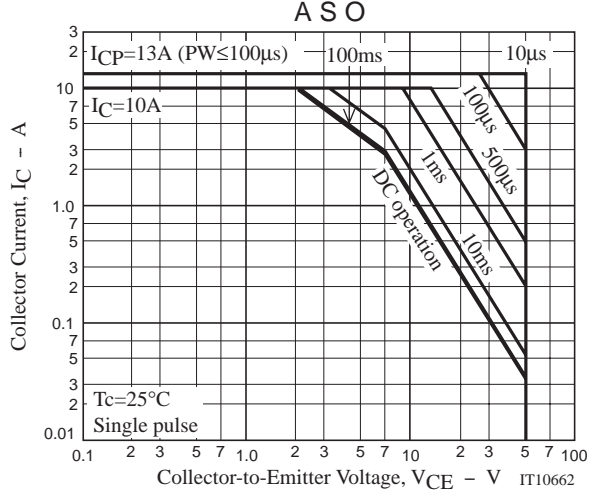
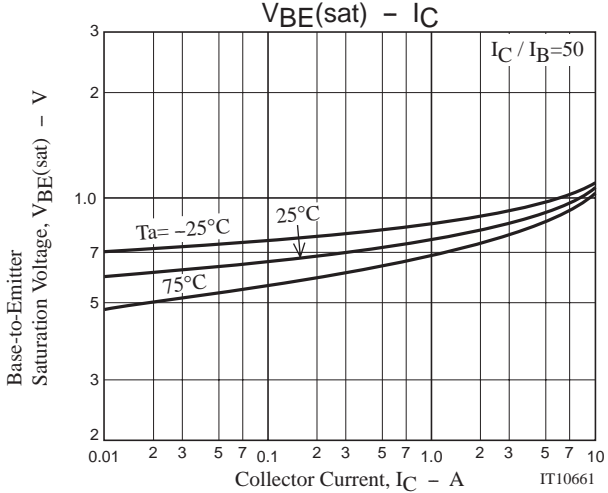
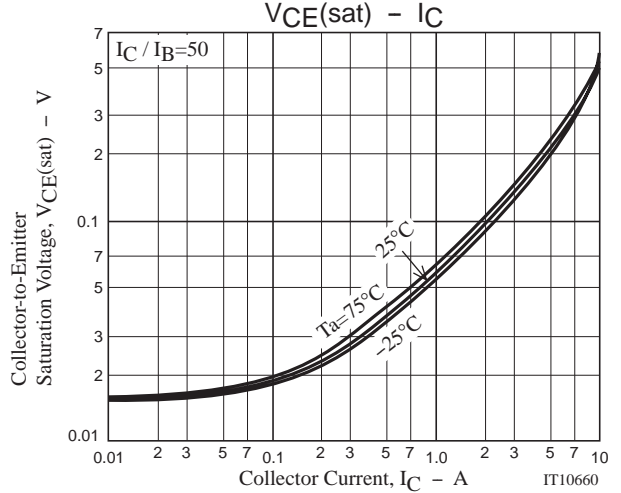
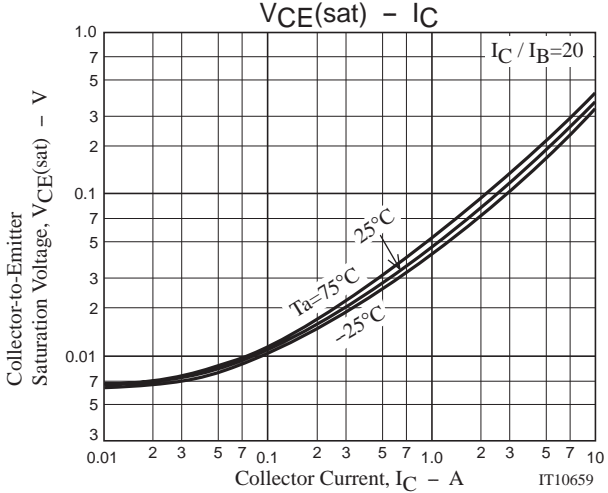
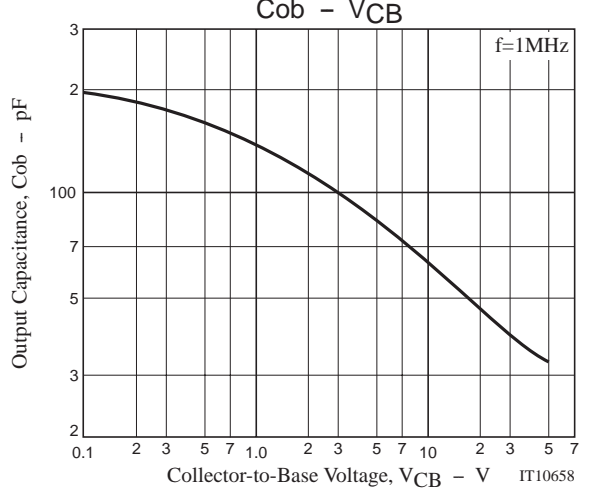
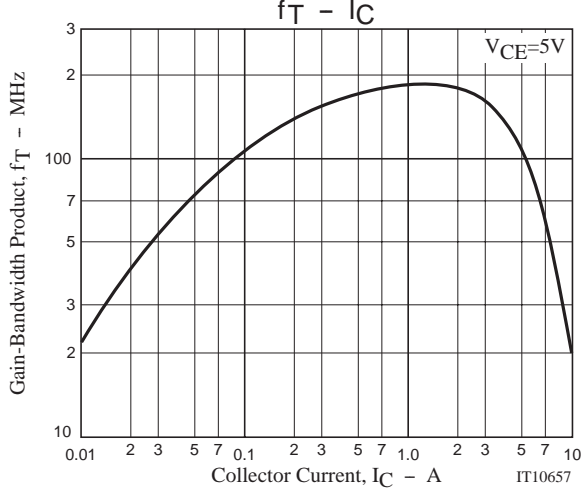
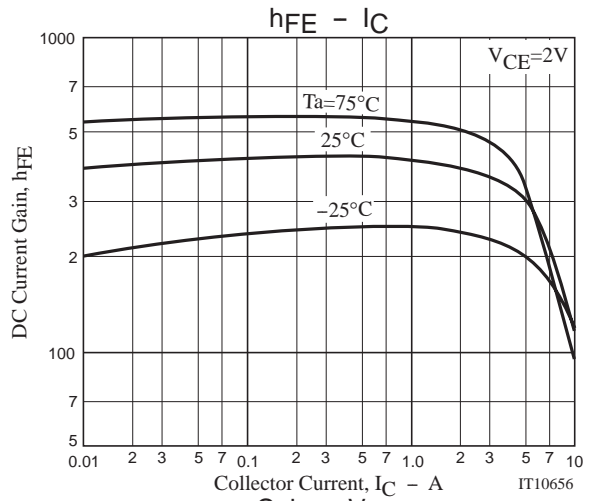
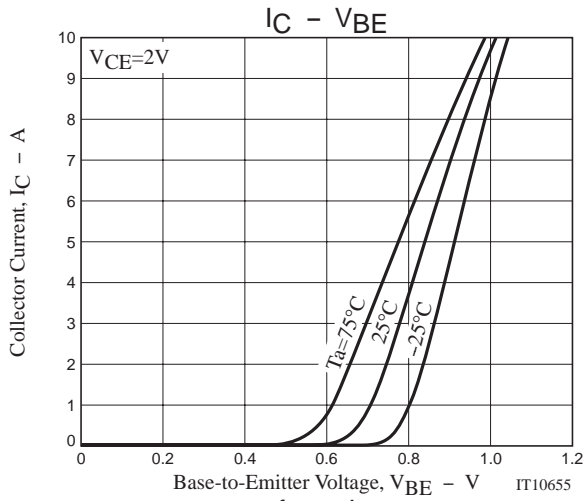
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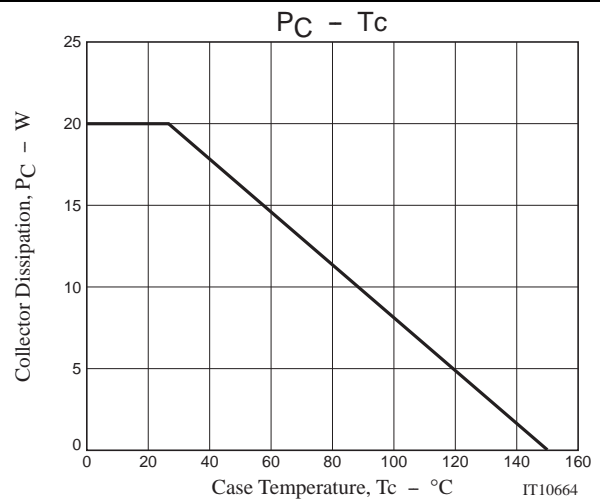
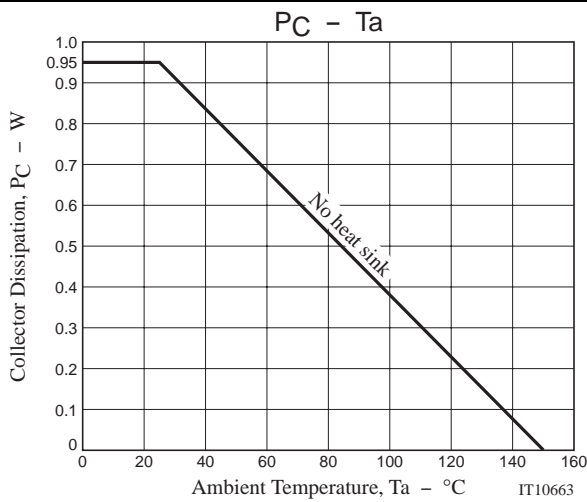


Switching Time Test Circuit



$$I_C = 20I_{B1} = -20I_{B2} = 3A$$





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