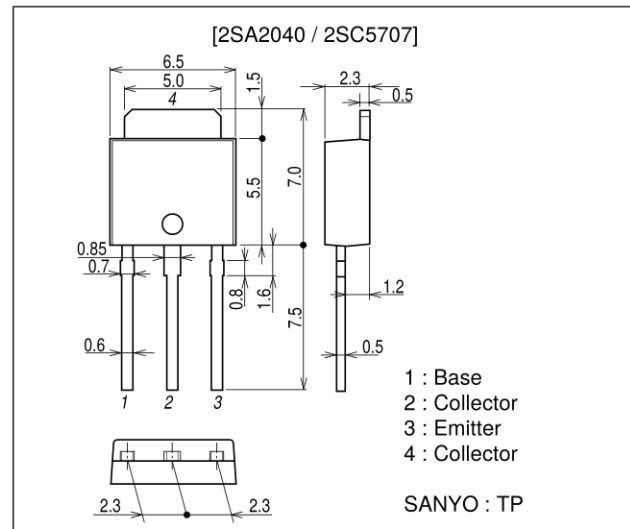
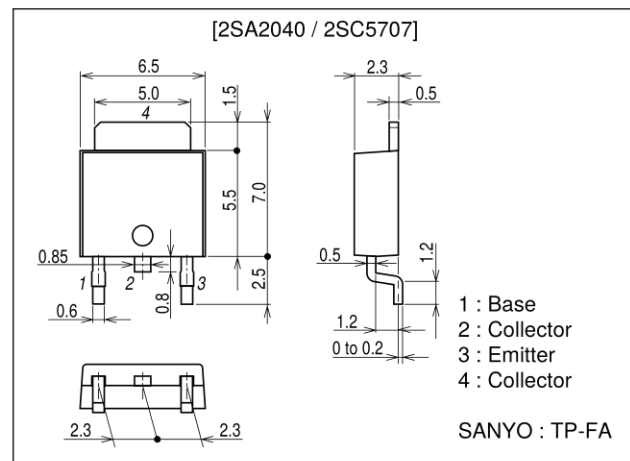


SANYO**High Current Switching Applications****Applications**

- DC-DC converter, relay drivers, lamp drivers, motor drivers, strobos.

Features

- Adoption of FBET, MBIT process.
- Large current capacitance.
- Low collector-to-emitter saturation voltage.
- High-speed switching.
- High allowable power dissipation.

Package Dimensionsunit : mm
2045B**Package Dimensions**unit : mm
2044B

- 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.
- SANYO assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all SANYO products described or contained herein.

Specifications

Note*() : 2SA2040

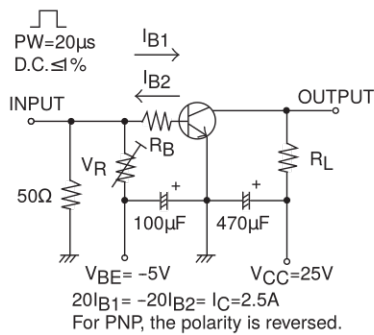
Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CB0}		(-50)80	V
Collector-to-Emitter Voltage	V _{CES}		(-50)80	V
Collector-to-Emitter Voltage	V _{CEO}		(-)50	V
Emitter-to-Base Voltage	V _{EBO}		(-)6	V
Collector Current	I _C		(-)8	A
Collector Current (Pulse)	I _{CP}		(-)11	A
Base Current	I _B		(-)2	A
Collector Dissipation	P _C		1.0	W
		T _c =25°C	15	W
Junction Temperature	T _J		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

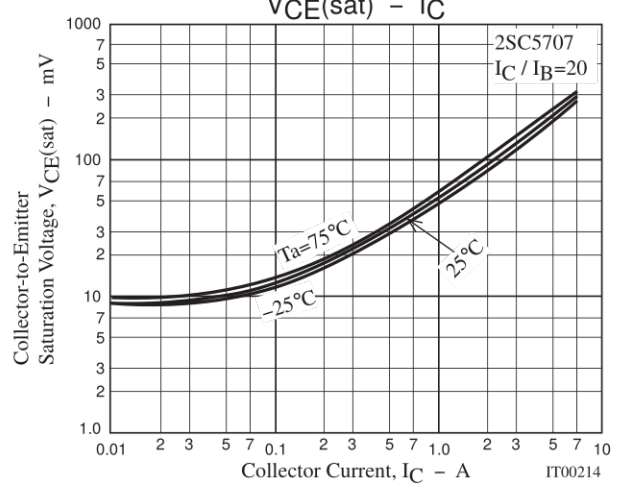
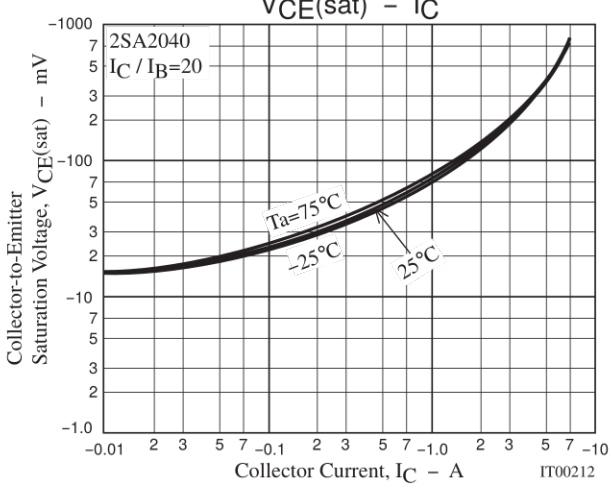
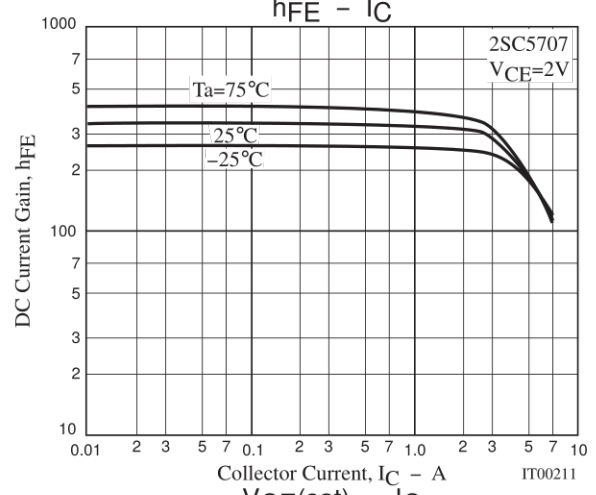
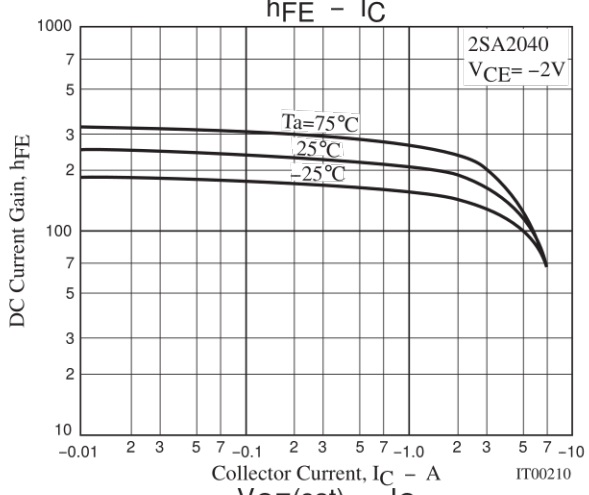
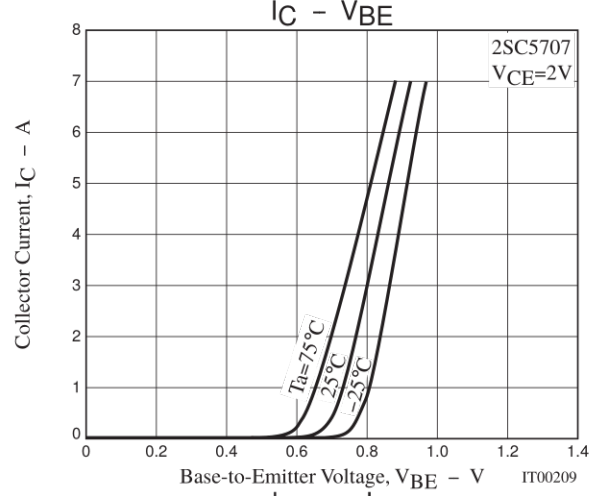
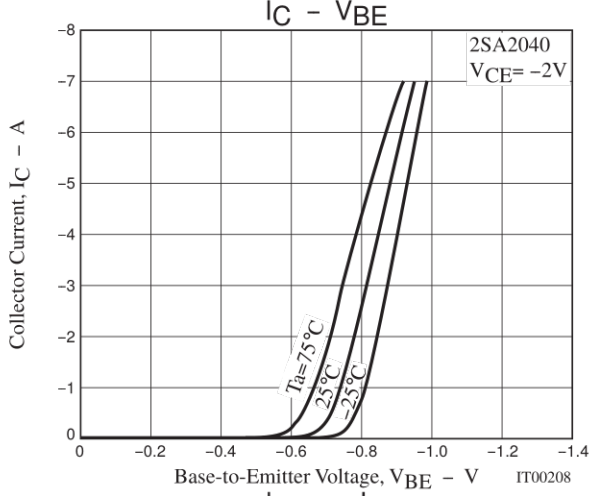
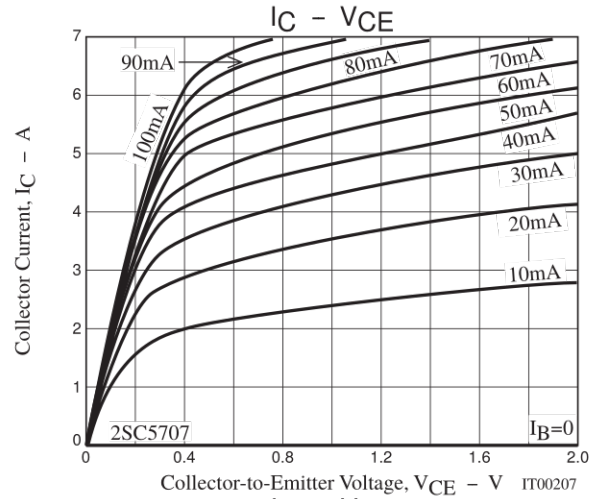
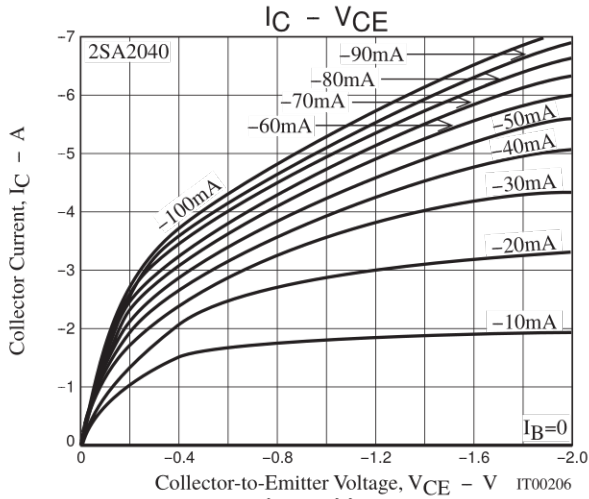
Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I _{CBO}	V _{CB} =(-)40V, I _E =0			(-)0.1	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} =(-)4V, I _C =0			(-)0.1	μA
DC Current Gain	h _{FE}	V _{CE} =(-)2V, I _C =(-)500mA	200		560	
Gain-Bandwidth Product	f _T	V _{CE} =(-)10V, I _C =(-)500mA		(290)330		MHz
Output Capacitance	C _{ob}	V _{CB} =(-)10V, f=1MHz		(50)28		pF
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =(-)3.5A, I _B =(-)175mA		(-230)160	(-390)240	mV
		I _C =(-)2A, I _B =(-)40mA		(-240)110	(-400)170	mV
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C =(-)2A, I _B =(-)40mA		(-)0.83	(-)1.2	V
Collector-to-Base Breakdown Voltage	V _{(BR)CBO}	I _C =(-)10μA, I _E =0	(-50)80			V
Collector-to-Emitter Breakdown Voltage	V _{(BR)CES}	I _C =(-)100μA, R _{BE} =∞	80			V
Collector-to-Emitter Breakdown Voltage	V _{(BR)CEO}	I _C =(-)1mA, R _{BE} =∞	(-)50			V
Emitter-to-Base Breakdown Voltage	V _{(BR)EBO}	I _E =(-)10μA, I _C =0	(-)6			V
Turn-On Time	t _{on}	See specified test circuit.		(40)30		ns
Storage Time	t _{stg}	See specified test circuit.		(225)420		ns
Fall Time	t _f	See specified test circuit.		25		ns

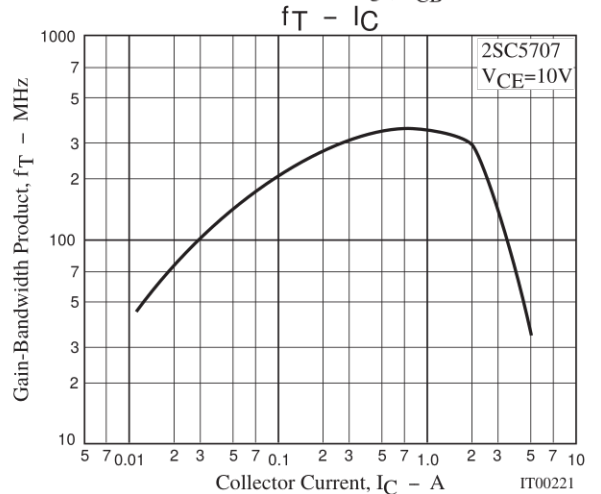
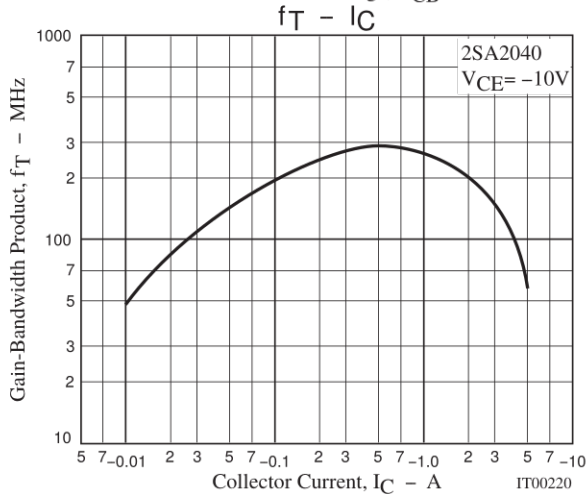
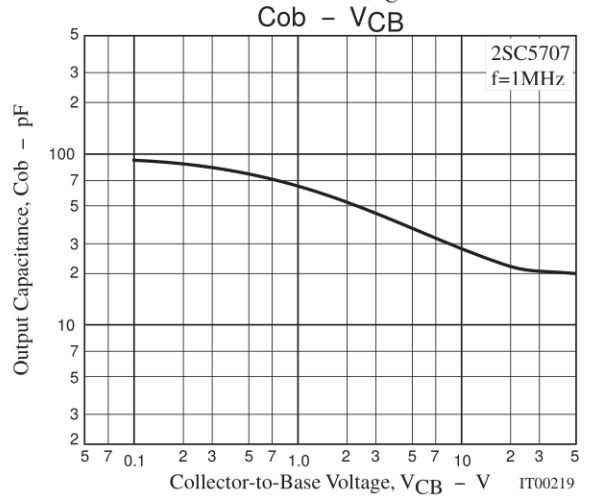
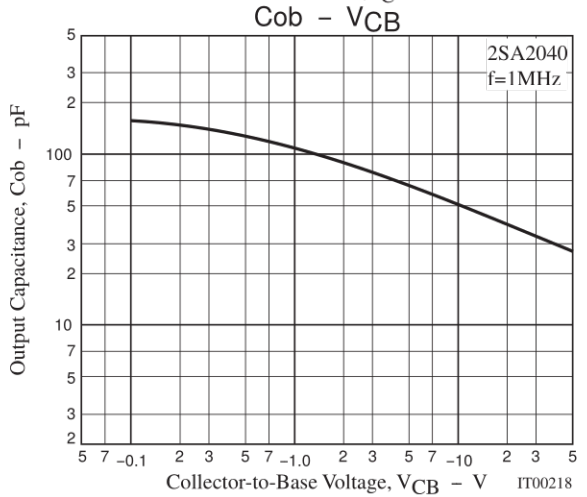
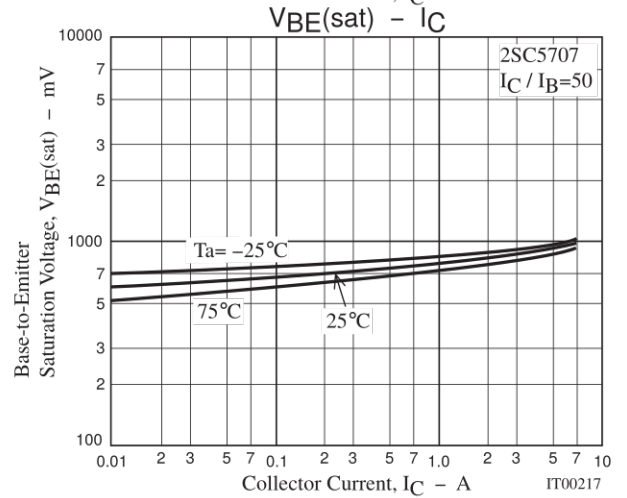
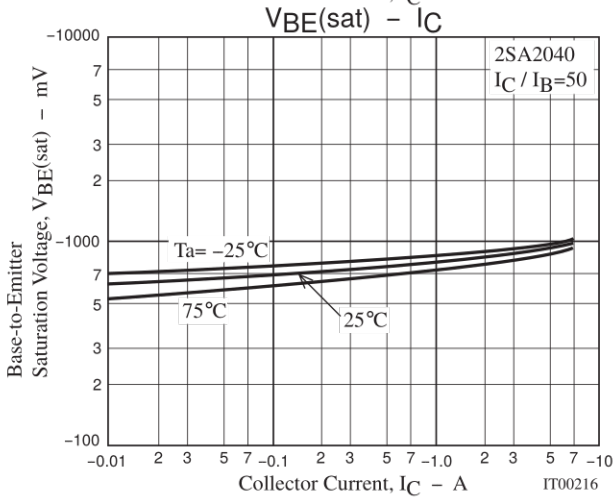
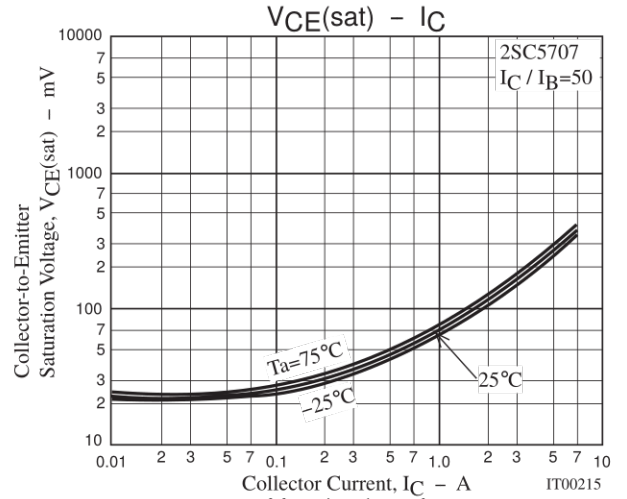
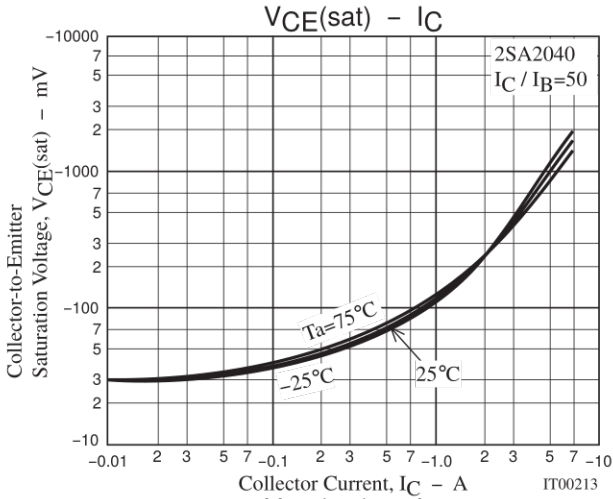
Switching Time Test Circuit



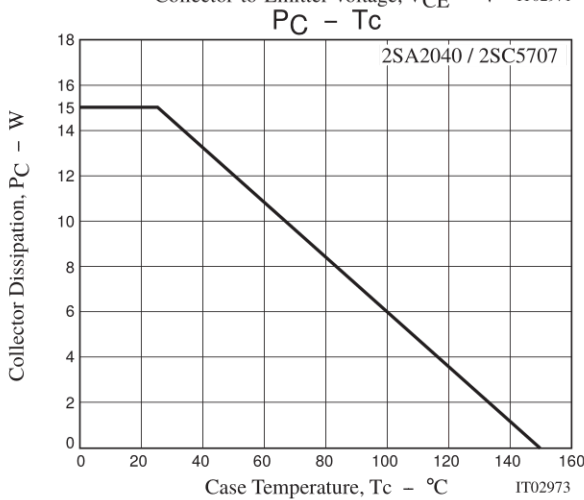
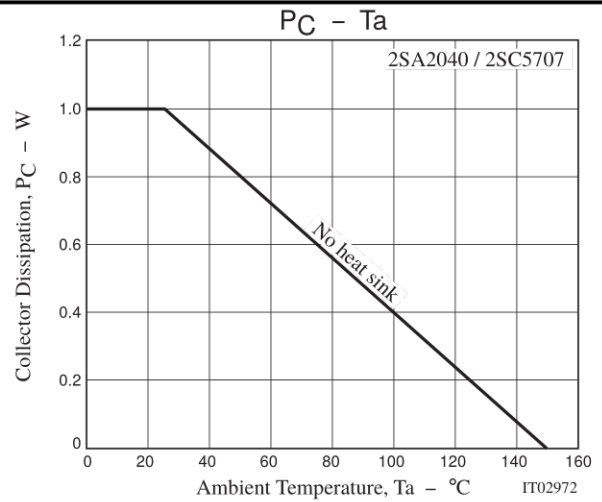
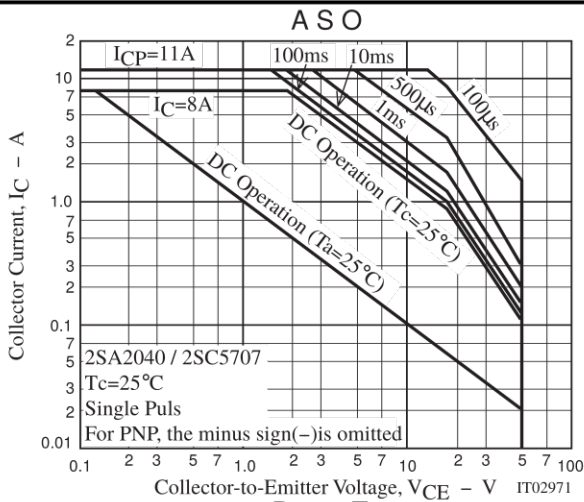
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