



2SA2037 / 2SC5694

DC / DC Converter Applications

Applications

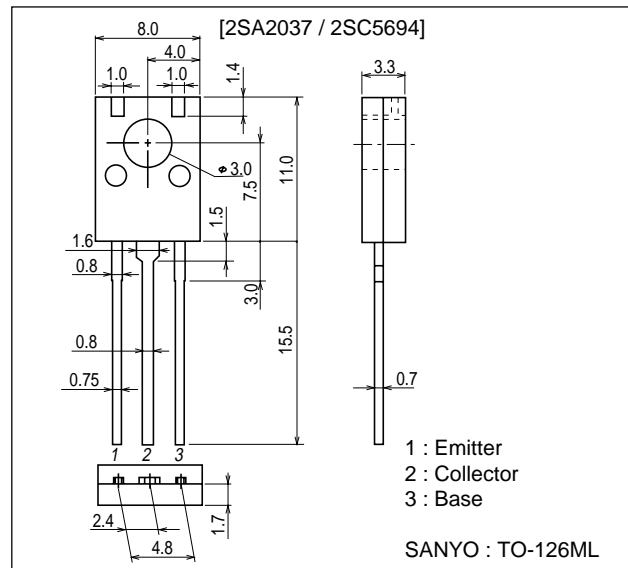
- Relay drivers, lamp drivers, motor drivers and printer drivers.

Features

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

Package Dimensions

unit : mm
2042B



Specifications

(): 2SA2037

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CB0}		(-50)60	V
Collector-to-Emitter Voltage	V _{CEO}		(-)50	V
Emitter-to-Base Voltage	V _{EB0}		(-)6	V
Collector Current	I _C		(-)7	A
Collector Current (Pulse)	I _{CP}		(-)10	A
Base Current	I _B		(-)1.2	A
Collector Dissipation	P _C		1.5	W
		T _c =25°C	10	W
Junction Temperature	T _j		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

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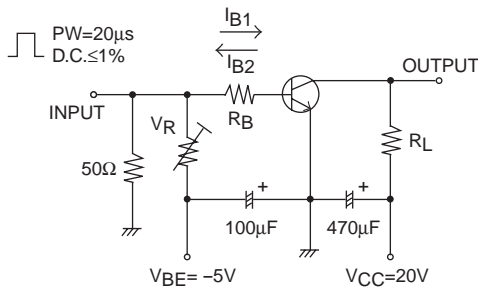
SANYO Electric Co., Ltd. Semiconductor Company

TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

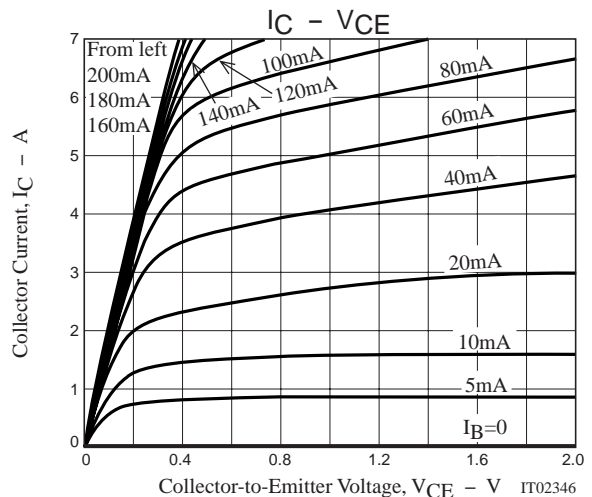
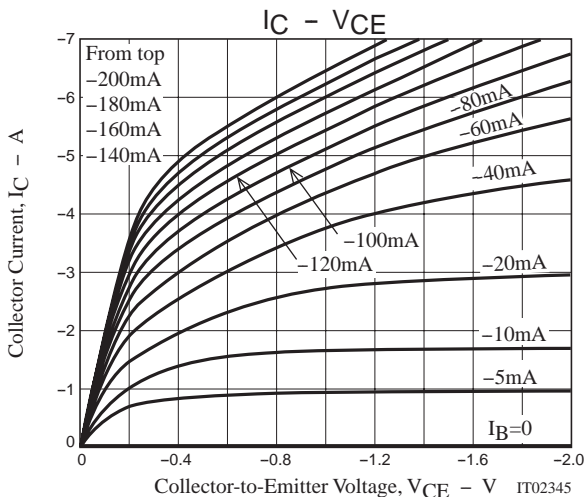
Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	ICBO	V _{CB} =(-)40V, I _E =0			(-)0.1	μA
Emitter Cutoff Current	IEBO	V _{EB} =(-)4V, I _C =0			(-)0.1	μA
DC Current Gain	h _{FE}	V _{CE} =(-)2V, I _C =(-)1A	150		300	
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 =(-)2.5A, I _B =(-)125mA		(-150)130	(-300)260	mV
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C =(-)2.5A, I _B =(-)125mA		(-)0.85	(-)1.2	V
Collector-to-Base Breakdown Voltage	V _{(BR)CBO}	I _C =(-)10μA, I _E =0	(-50)60			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.		30		ns
Storage Time	t _{stg}	See specified test circuit.		(250)300		ns
Fall Time	t _f	See specified test circuit.		15		ns

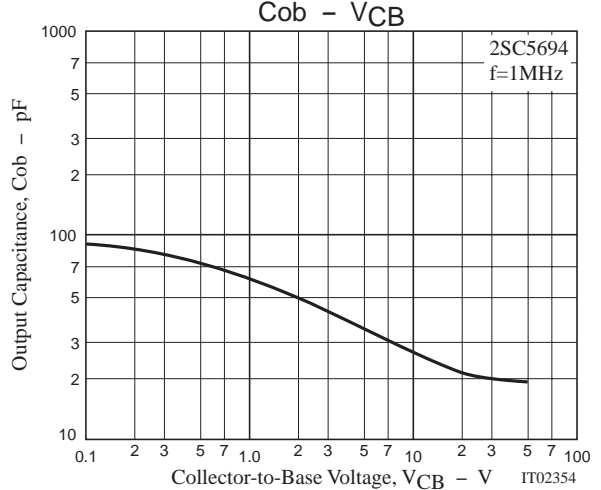
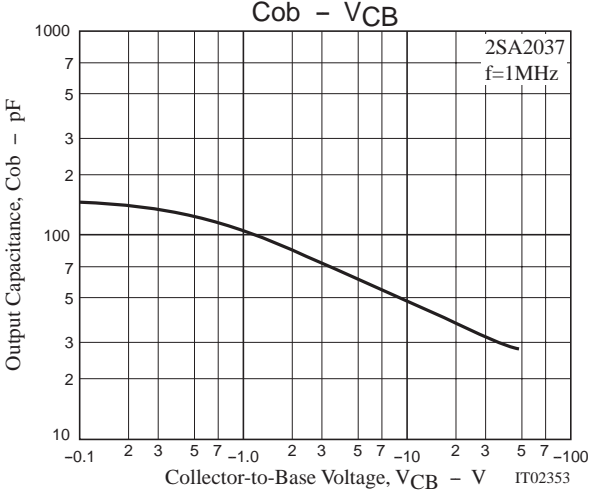
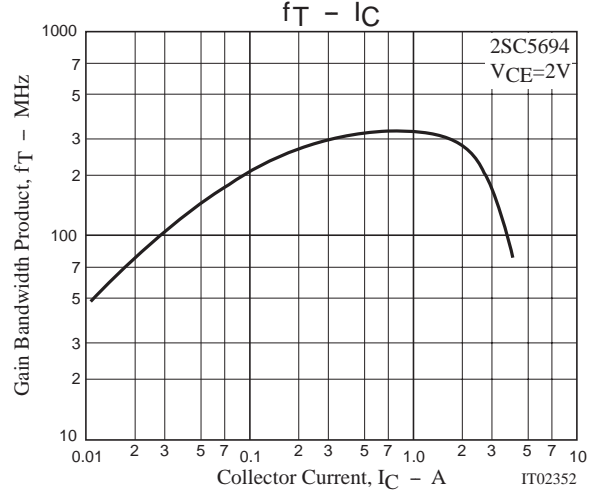
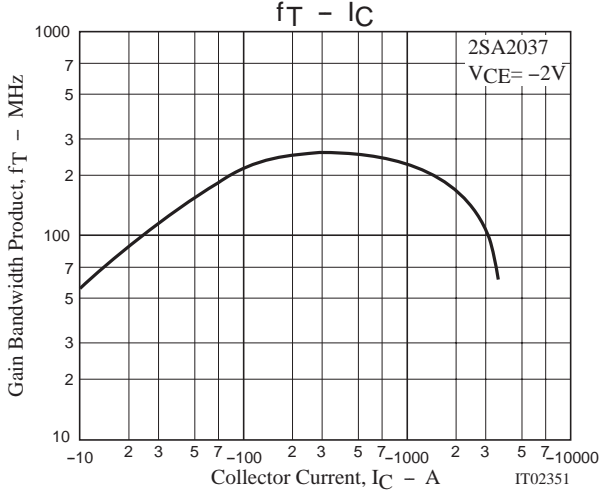
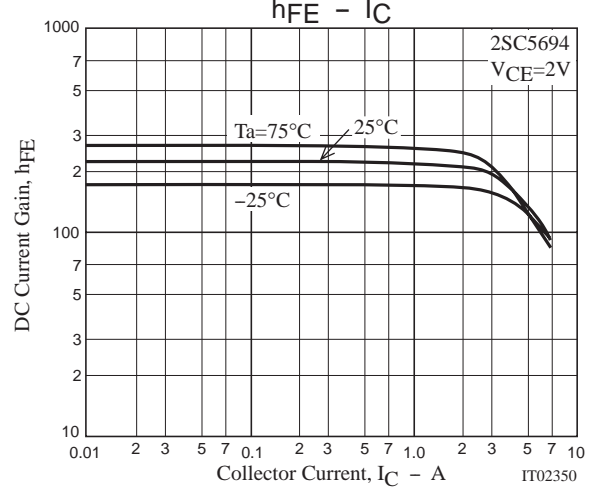
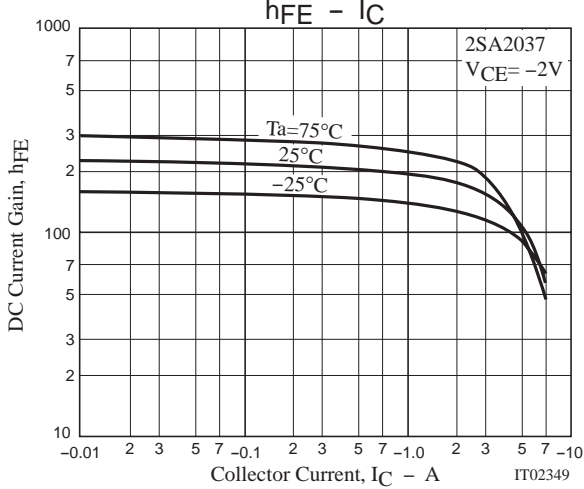
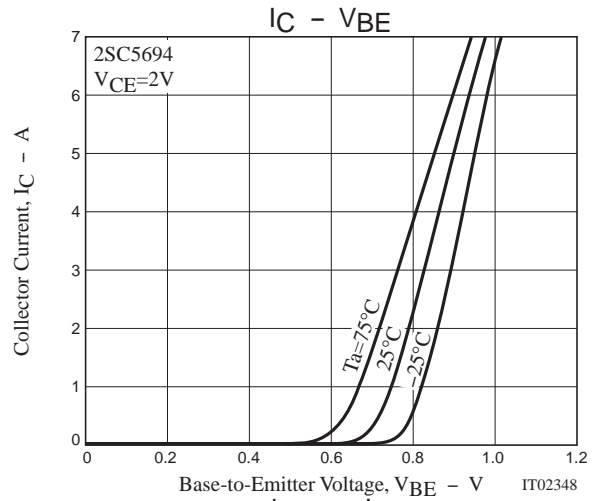
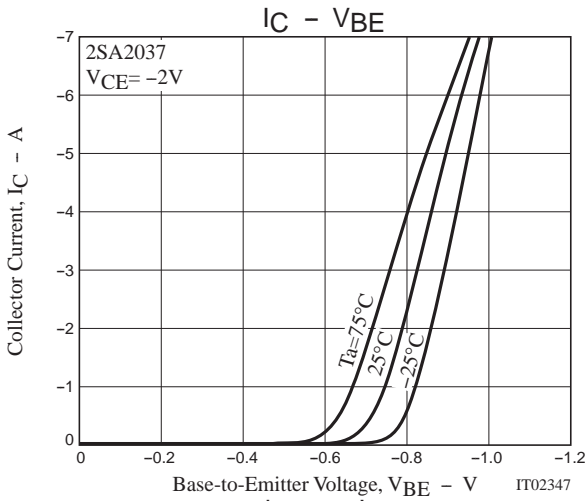
Switching Time Test Circuit



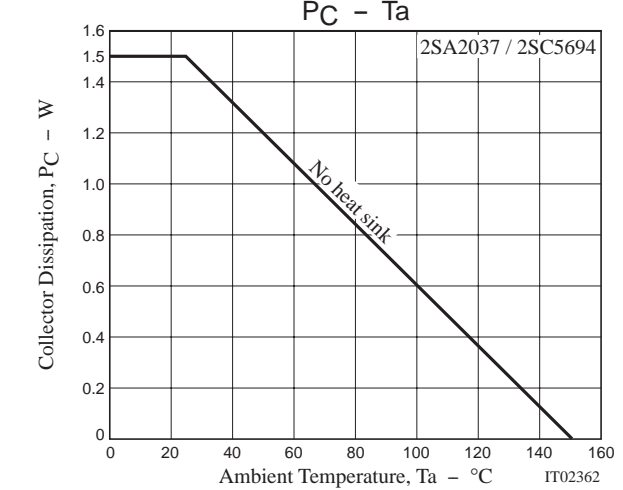
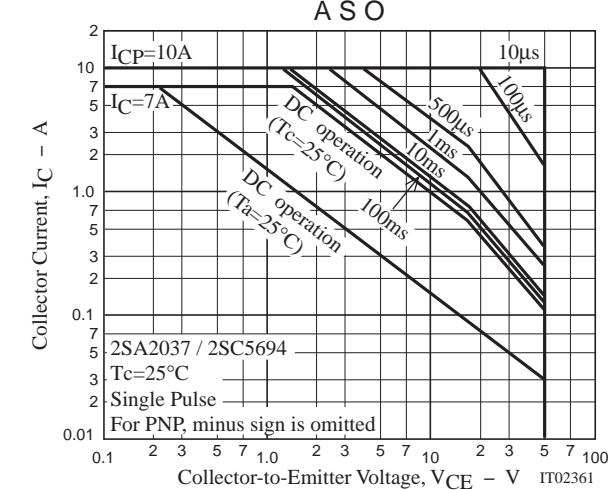
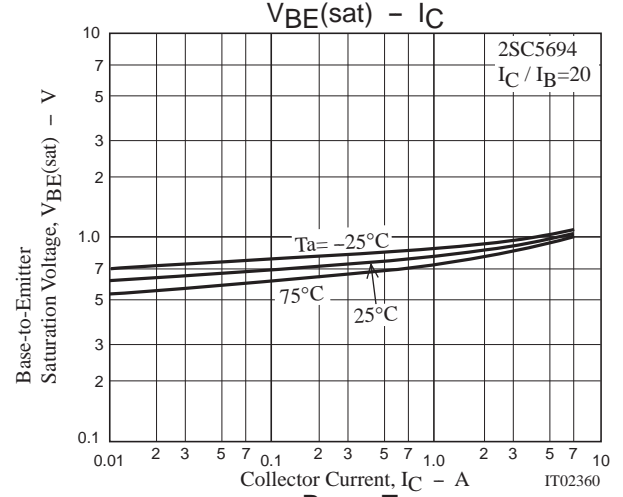
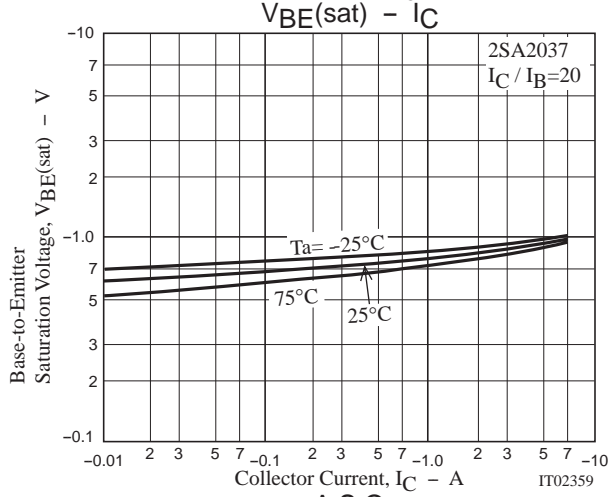
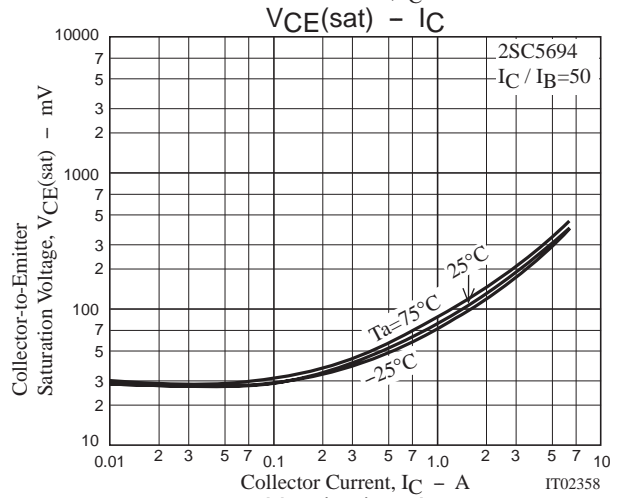
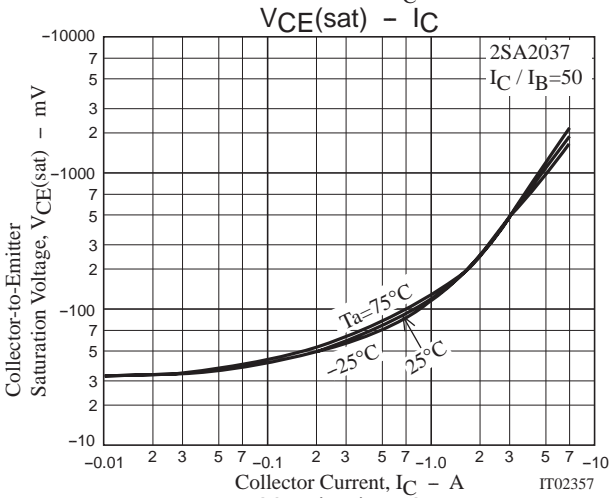
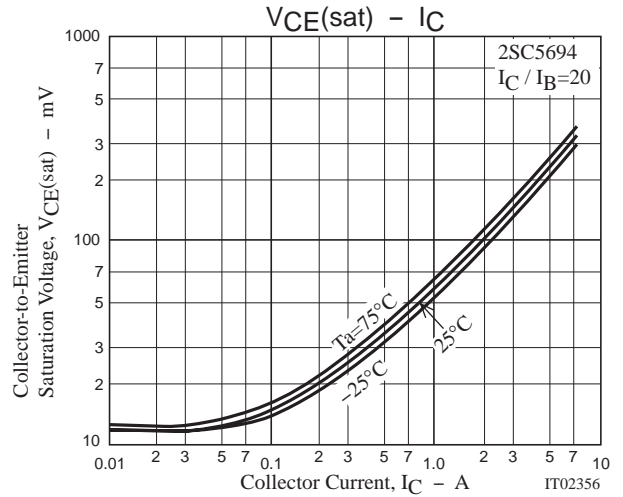
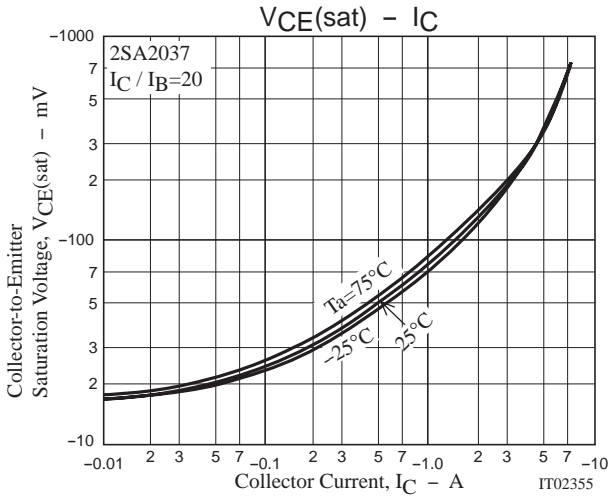
10I_{B1} = -10I_{B2} = I_C = 2A
 For PNP, the polarity is reversed.

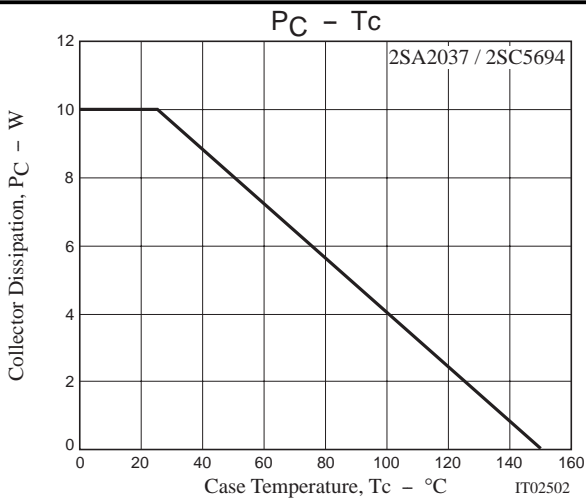


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