

**DC / DC Converter Applications****Applications**

- Relay drivers, lamp drivers, motor drivers, strobes.

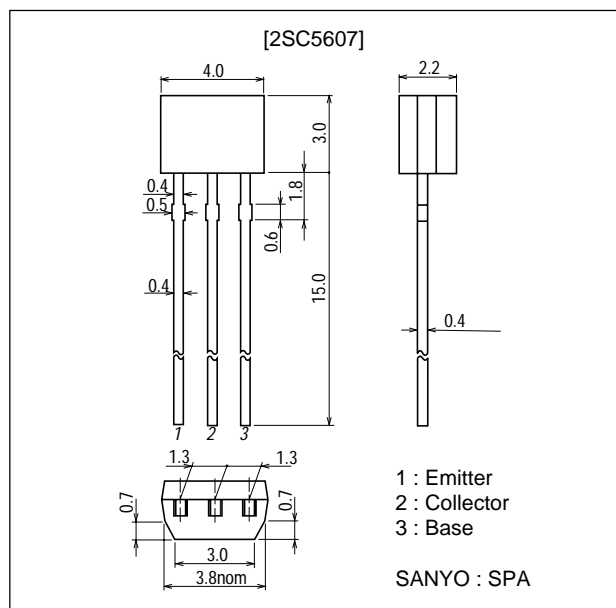
Features

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

Package Dimensions

unit : mm

2033A

**Specifications****Absolute Maximum Ratings** at Ta=25°C

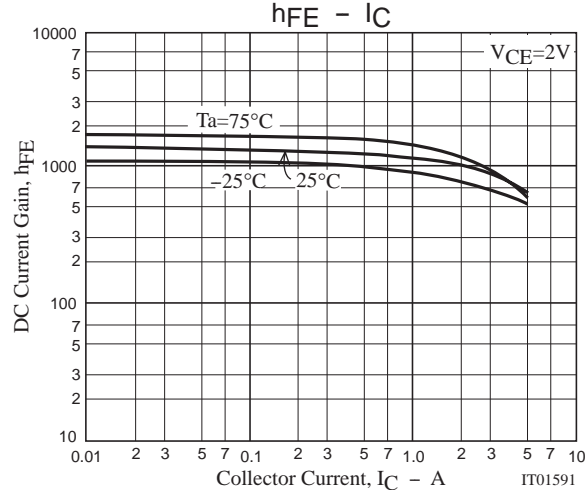
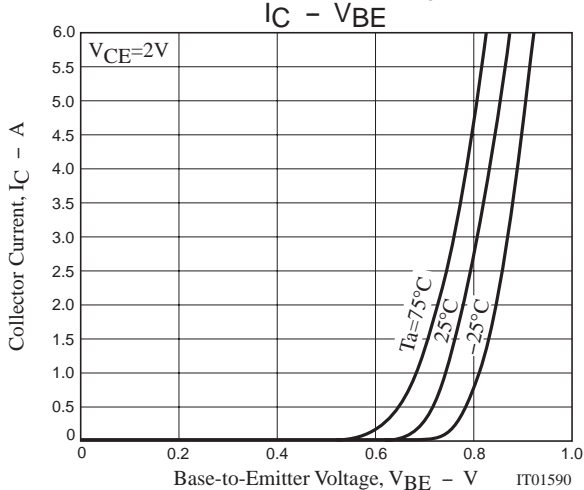
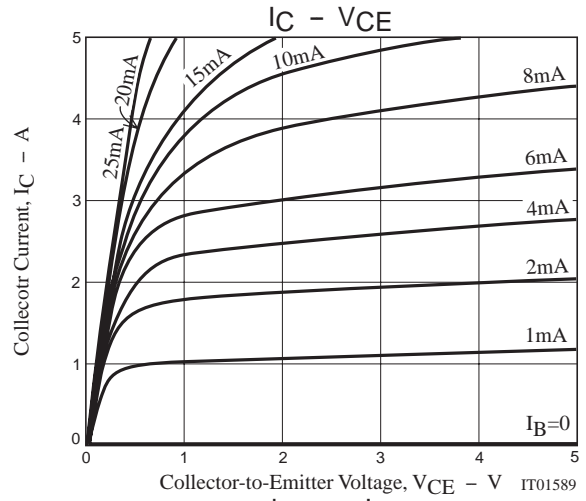
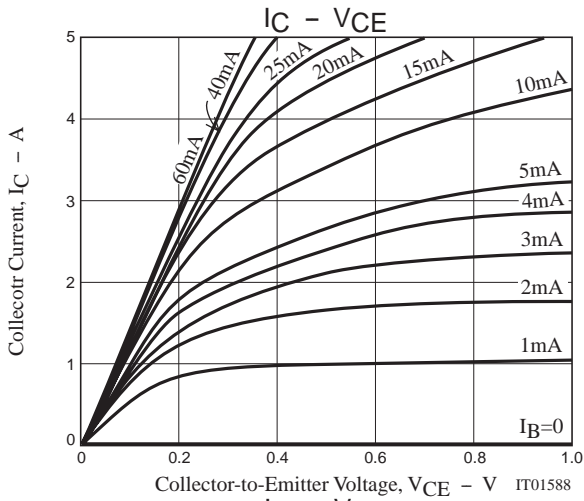
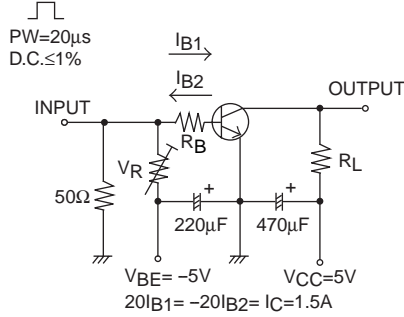
Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CB0}		15	V
Collector-to-Emitter Voltage	V _{CE0}		10	V
Emitter-to-Base Voltage	V _{EB0}		7	V
Collector Current	I _C		5	A
Collector Current (Pulse)	I _{CP}		9	A
Base Current	I _B		1	A
Collector Dissipation	PC		0.55	W
Junction Temperature	T _J		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

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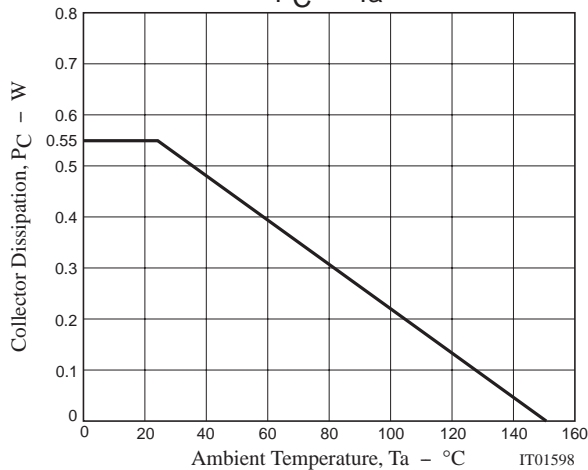
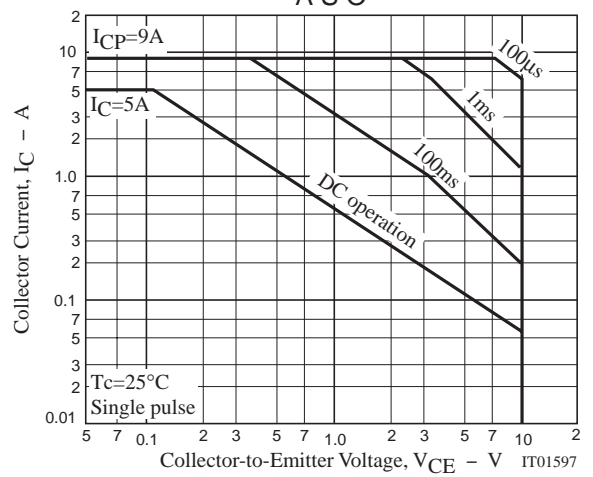
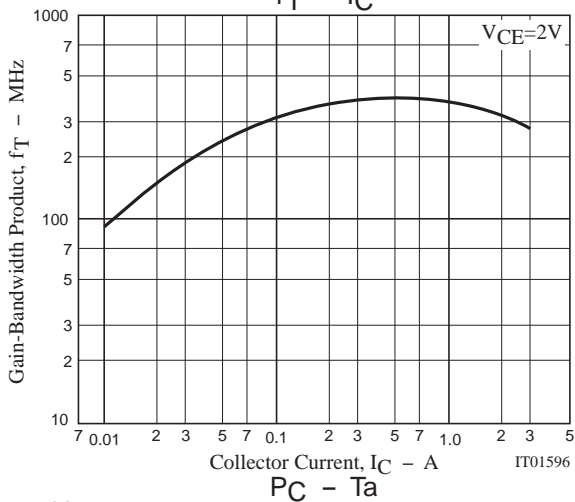
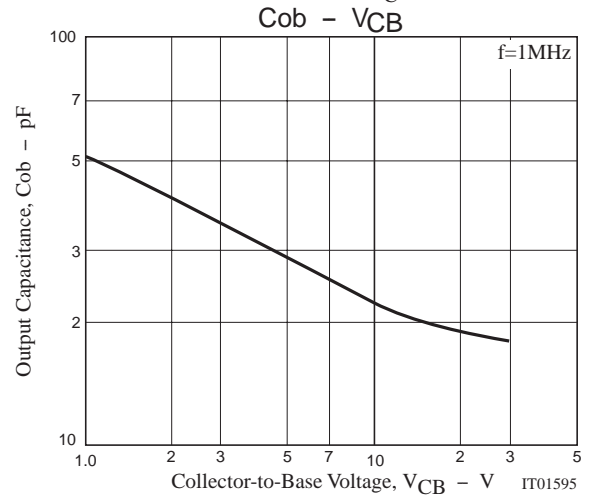
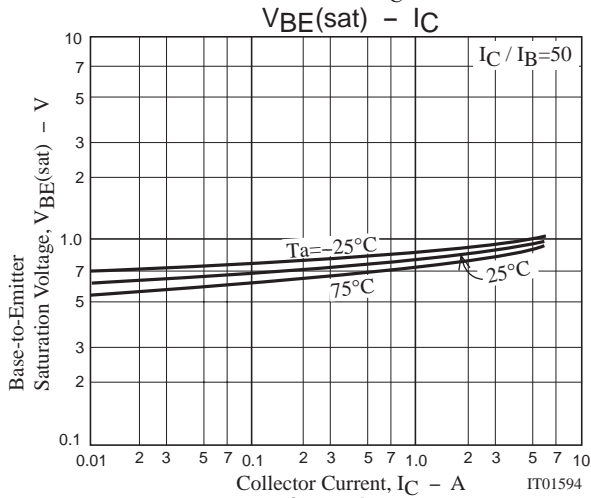
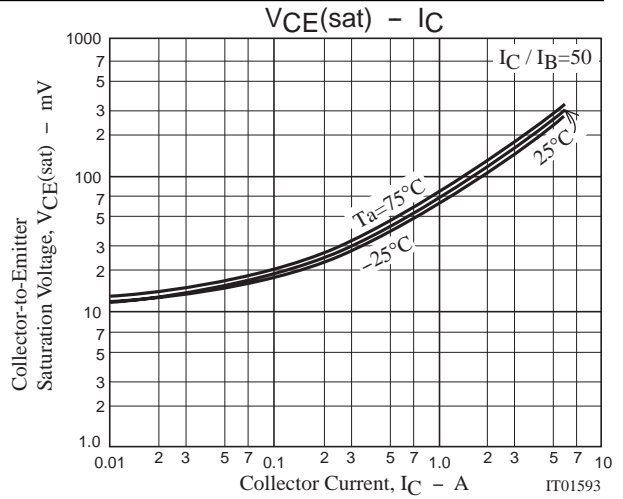
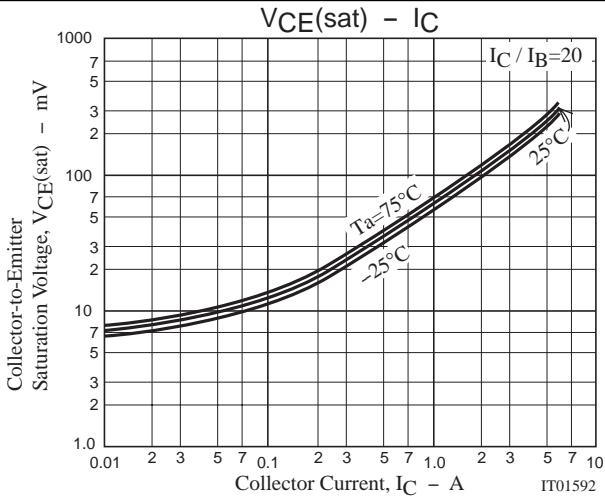
Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	ICBO	V _{CB} =10V, I _E =0			0.1	μA
Emitter Cutoff Current	IEBO	V _{EB} =4V, I _C =0			0.1	μA
DC Current Gain	hFE1	V _{CE} =2V, I _C =500mA	600			
	hFE2	V _{CE} =2V, I _C =3A	200			
Gain-Bandwidth Product	f _T	V _{CE} =2V, I _C =500mA		380		MHz
Output Capacitance	C _{ob}	V _{CB} =10V, f=1MHz		23		pF
Collector-to-Emitter Saturation Voltage	V _{CE(sat)1}	I _C =1.5A, I _B =30mA		100	150	mV
	V _{CE(sat)2}	I _C =3A, I _B =60mA		180	270	mV
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C =1.5A, I _B =30mA		0.85	1.2	V
Collector-to-Base Breakdown Voltage	V(BR)CBO	I _C =10μA, I _E =0	15			V
Collector-to-Emitter Breakdown Voltage	V(BR)CEO	I _C =1mA, R _{BE} =∞	10			V
Emitter-to-Base Breakdown Voltage	V(BR)EBO	I _E =10μA, I _C =0	7			V
Turn-On Time	t _{on}	See specified Test Circuit.		30		ns
Storage Time	t _{stg}	See specified Test Circuit.		210		ns
Fall Time	t _f	See specified Test Circuit.		11		ns

Switching Time Test Circuit



2SC5607



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