

Ordering number : ENN6403A



NPN Epitaxial Planar Silicon Transistor

2SC5607

DC / DC Converter Applications

Applications

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

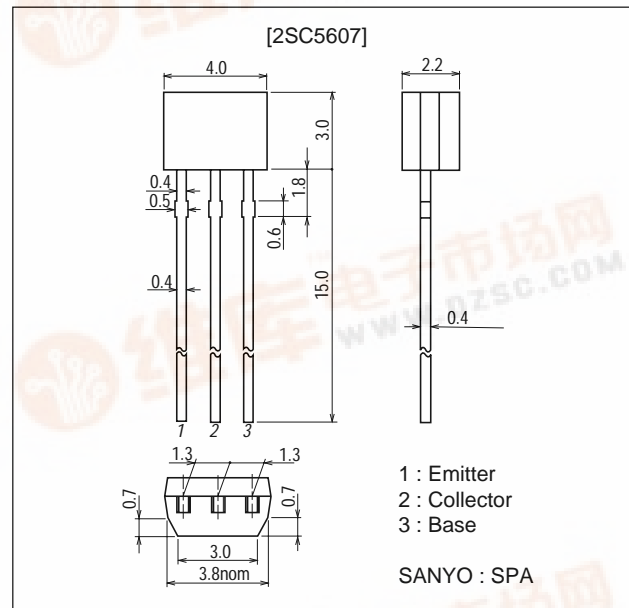
Features

- 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 _{CEO}		10	V
Emitter-to-Base Voltage	V _{EBO}		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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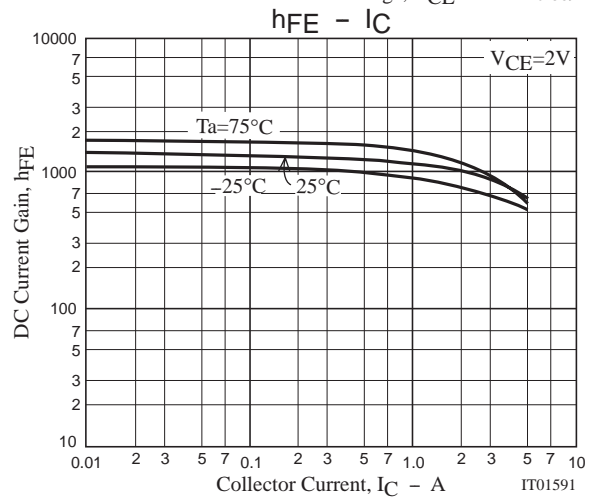
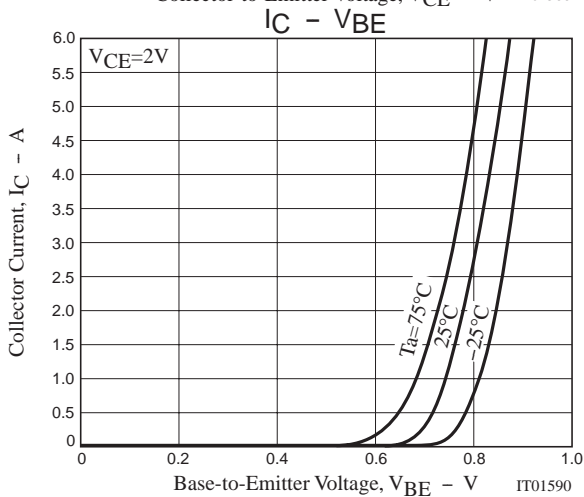
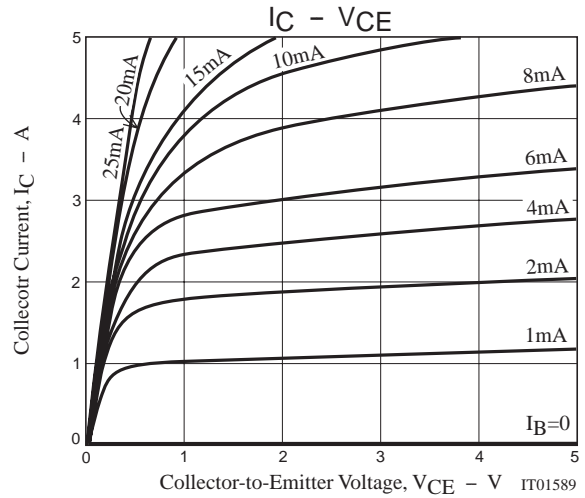
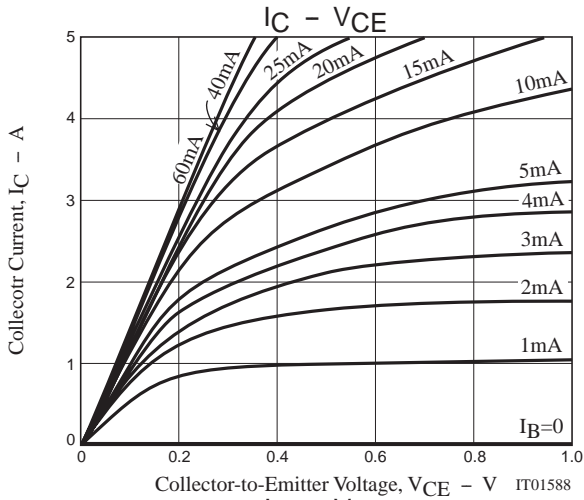
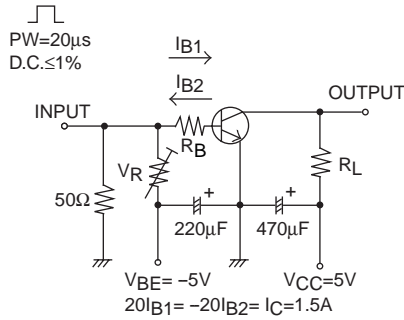


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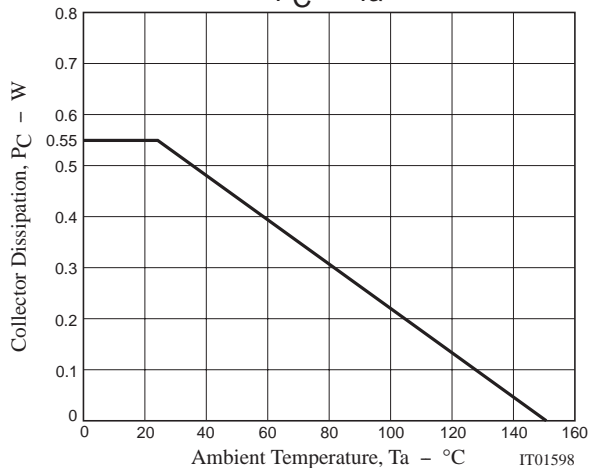
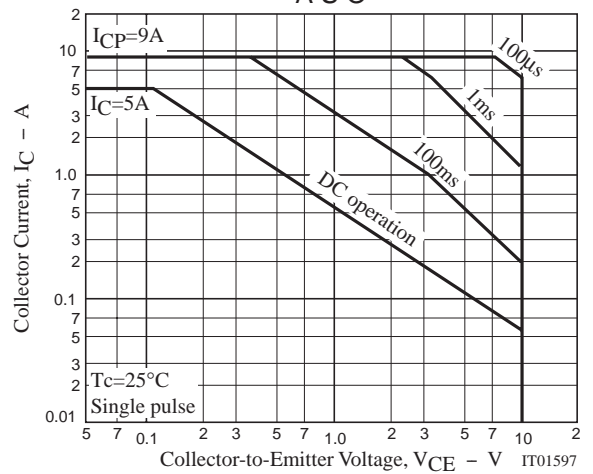
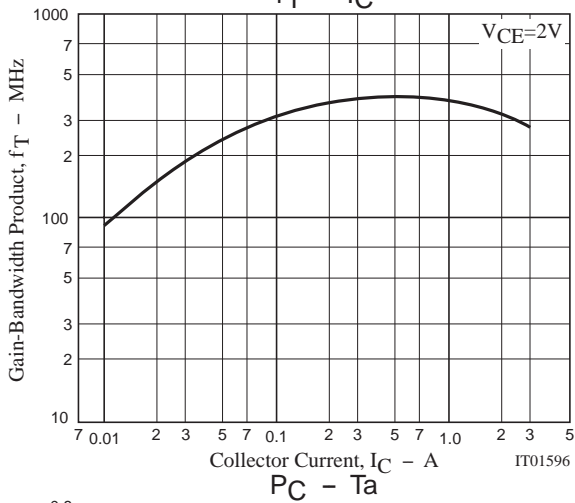
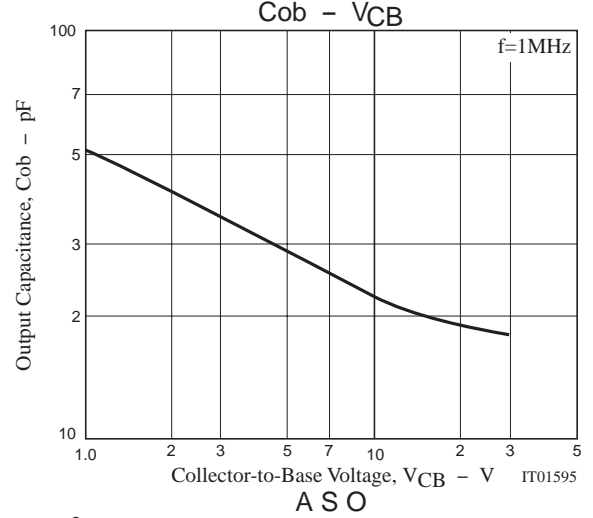
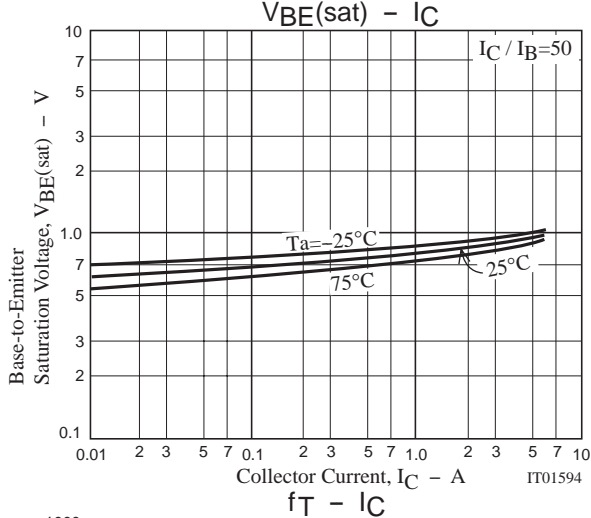
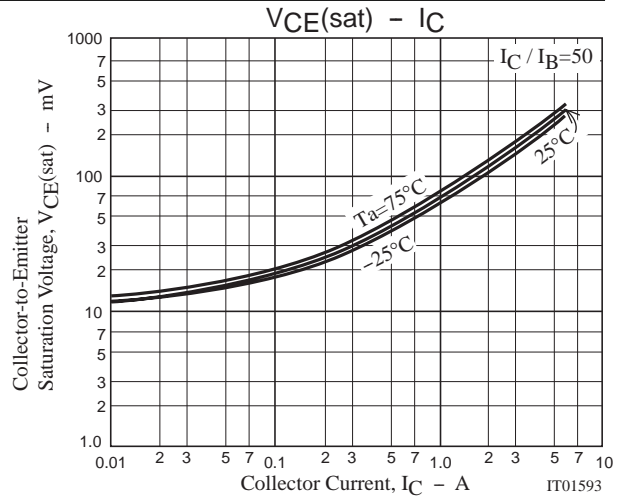
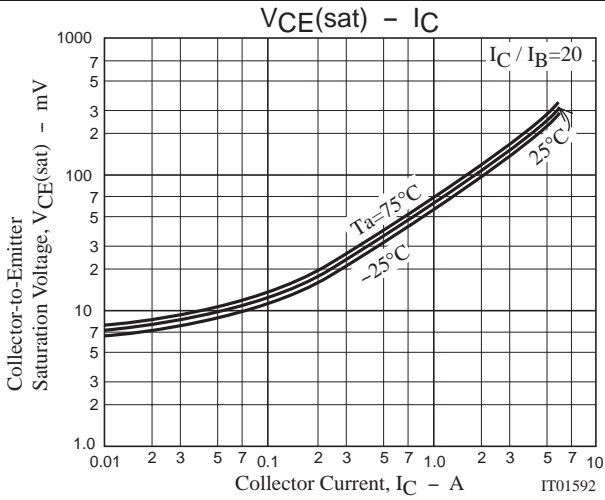
Electrical Characteristics at $T_a=25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=10\text{V}, I_E=0$			0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=4\text{V}, I_C=0$			0.1	μA
DC Current Gain	h_{FE1}	$V_{CE}=2\text{V}, I_C=500\text{mA}$	600			
	h_{FE2}	$V_{CE}=2\text{V}, I_C=3\text{A}$	200			
Gain-Bandwidth Product	f_T	$V_{CE}=2\text{V}, I_C=500\text{mA}$		380		MHz
Output Capacitance	C_{ob}	$V_{CB}=10\text{V}, f=1\text{MHz}$		23		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)1}$	$I_C=1.5\text{A}, I_B=30\text{mA}$		100	150	mV
	$V_{CE(sat)2}$	$I_C=3\text{A}, I_B=60\text{mA}$		180	270	mV
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=1.5\text{A}, I_B=30\text{mA}$		0.85	1.2	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0$	15			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, R_{BE}=\infty$	10			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}, I_C=0$	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



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