



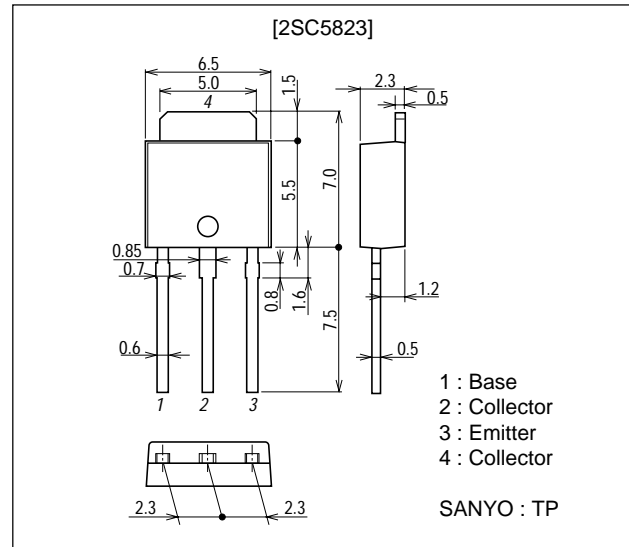
Switching Regulator Applications

Features

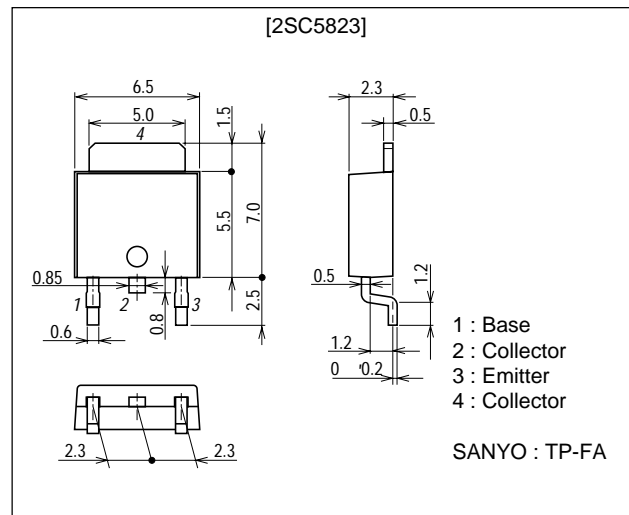
- High breakdown voltage.
- High-speed switching.
- Wide ASO.
- Adoption of MBIT process.

Package Dimensions

unit : mm
2045B



unit : mm
2044B



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Specifications

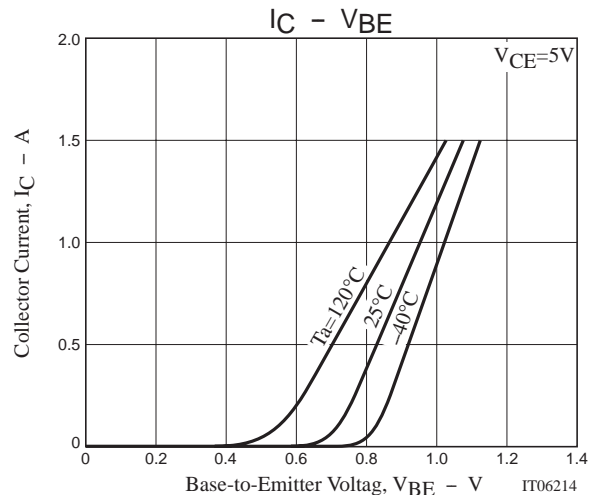
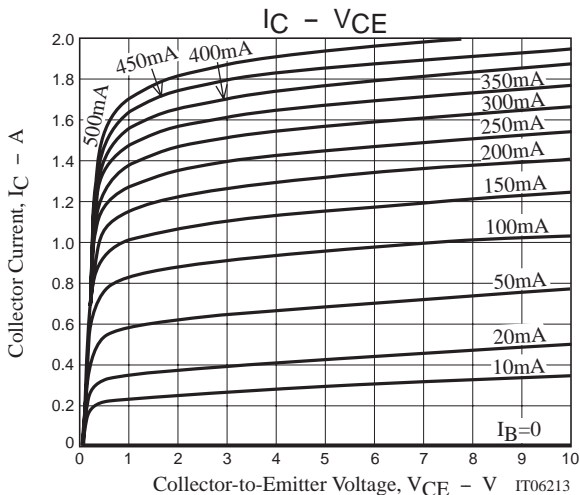
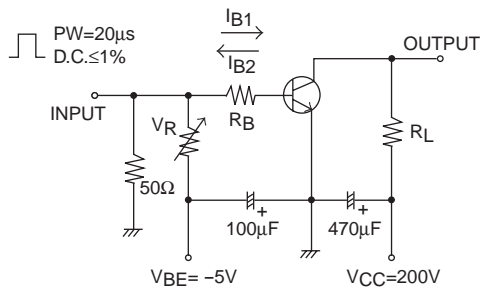
Absolute Maximum Ratings at Ta=25°C

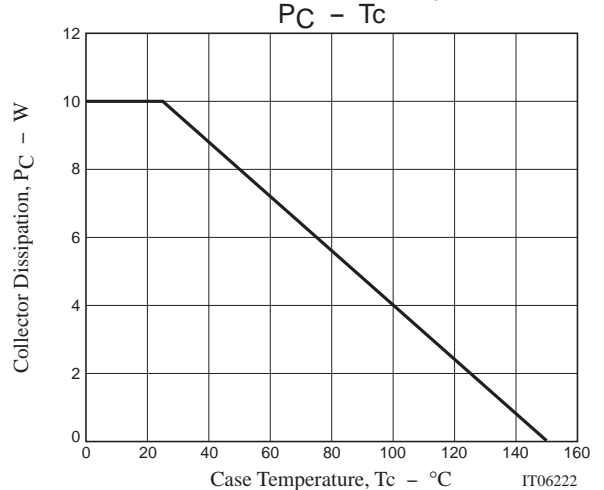
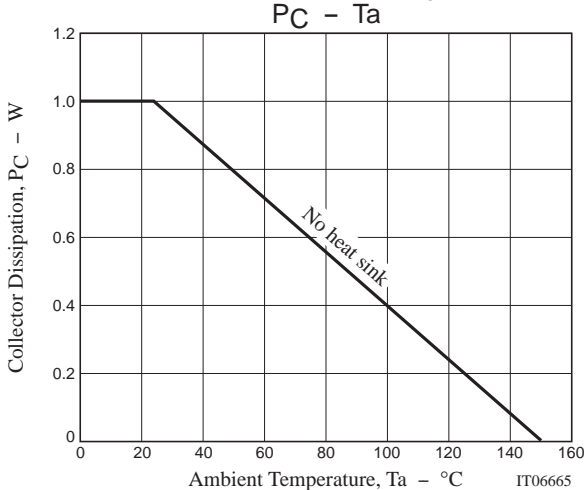
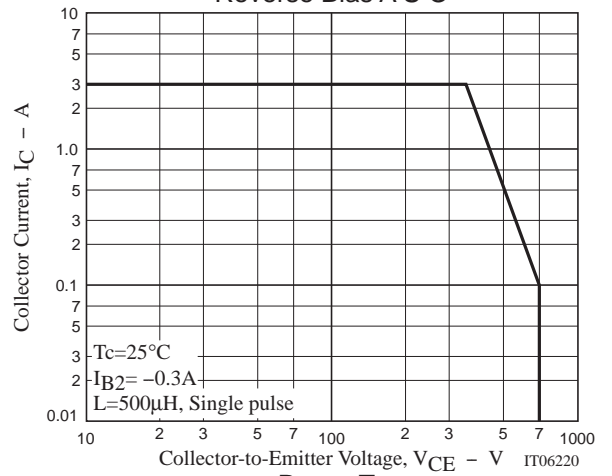
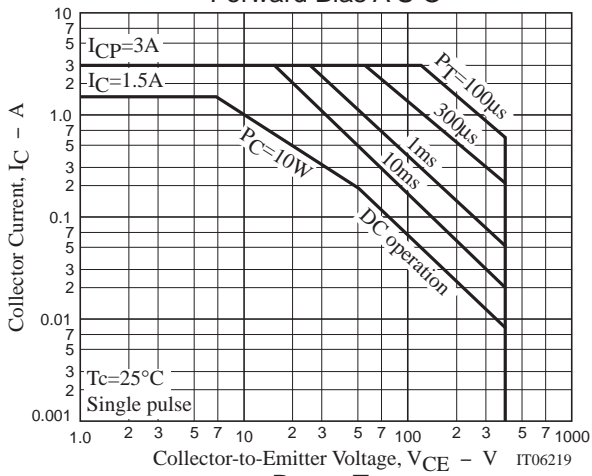
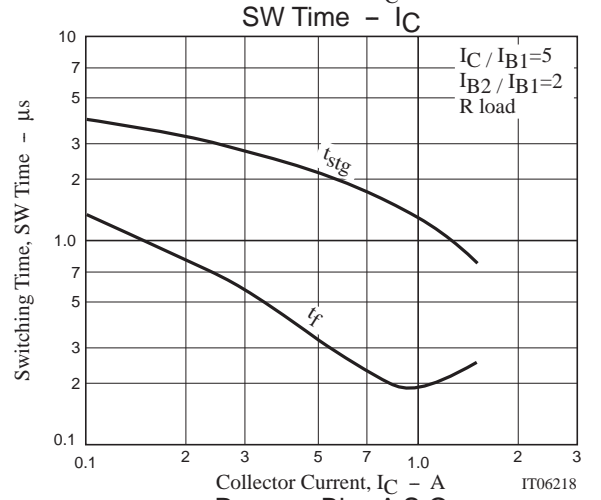
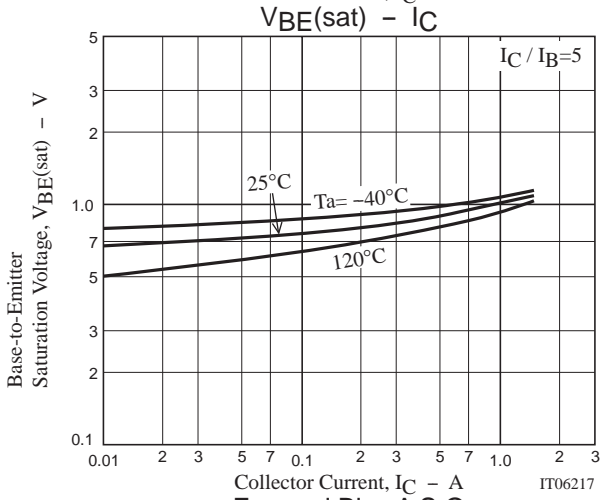
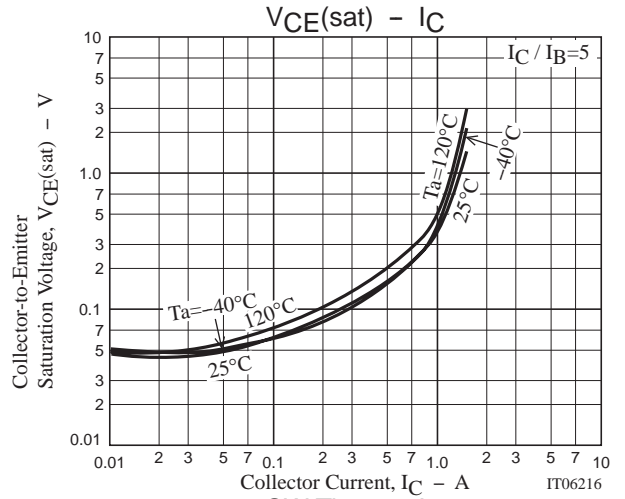
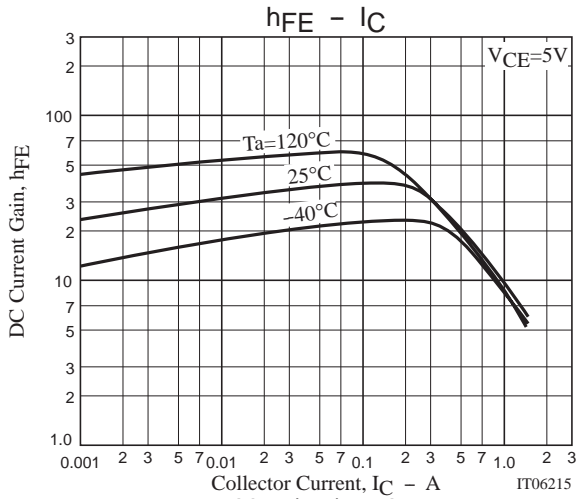
Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CB0}		700	V
Collector-to-Emitter Voltage	V _{CEO}		400	V
Emitter-to-Base Voltage	V _{EBO}		8	V
Collector Current	I _C		1.5	A
Collector Current (Pulse)	I _{CP}	PW≤300μs, duty cycle≤10%	3	A
Base Current	I _B		0.7	A
Collector Dissipation	P _C		1.0	W
		T _c =25°C	10	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} =400V, I _E =0			10	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} =5V, I _C =0			10	μA
DC Current Gain	h _{FE1}	V _{CE} =5V, I _C =0.1A	20		50	
	h _{FE2}	V _{CE} =5V, I _C =0.7A	10			
	h _{FE3}	V _{CE} =5V, I _C =1mA	10			
Gain-Bandwidth Product	f _T	V _{CE} =10V, I _C =0.1A		20		MHz
Output Capacitance	C _{ob}	V _{CB} =10V, f=1MHz		10		pF
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =0.7A, I _B =0.14A			0.8	V
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C =0.7A, I _B =0.14A			1.5	V
Collector-to-Base Breakdown Voltage	V _{(BR)CBO}	I _C =1mA, I _E =0	700			V
Collector-to-Emitter Breakdown Voltage	V _{(BR)CEO}	I _C =5mA, R _{BE} =∞	400			V
Emitter-to-Base Breakdown Voltage	V _{(BR)EBO}	I _E =1mA, I _C =0	8			V
Turn-On Time	t _{on}	I _C =1A, I _{B1} =0.2A, I _{B2} =-0.4A, R _L =200Ω, V _{CC} =200V			0.5	μs
Storage Time	t _{stg}	I _C =1A, I _{B1} =0.2A, I _{B2} =-0.4A, R _L =200Ω, V _{CC} =200V			2.5	μs
Fall Time	t _f	I _C =1A, I _{B1} =0.2A, I _{B2} =-0.4A, R _L =200Ω, V _{CC} =200V			0.25	μs

Switching Time Test Circuit





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