



High-Current Switching Applications

Applications

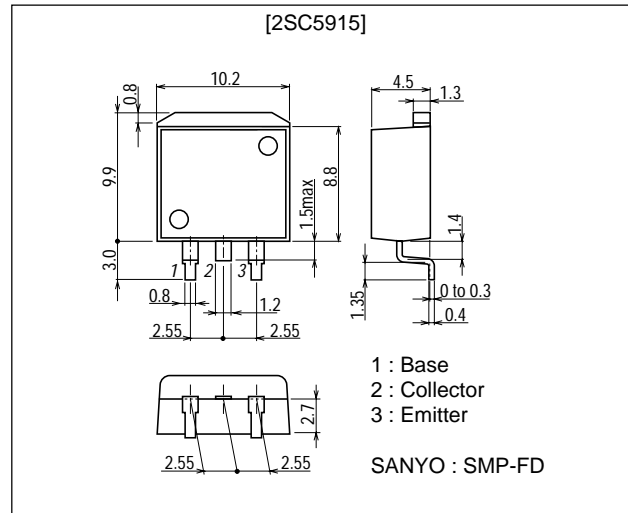
- Relay drivers, lamp drivers, motor drivers, inverters.

Features

- Adoption of MBIT processes.
- Large current capacitance.
- Low collector-to-emitter saturation voltage.
- High-speed switching.
- Surface mount type.

Package Dimensions

unit : mm
2069C



Specifications

Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CB0}		120	V
Collector-to-Emitter Voltage	V_{CES}		120	V
Collector-to-Emitter Voltage	V_{CEO}		50	V
Emitter-to-Base Voltage	V_{EBO}		6	V
Collector Current	I_C		10	A
Collector Current (Pulse)	I_{CP}		15	A
Base Current	I_B		2	A
Collector Dissipation	P_C		1.65	W
		$T_c=25^\circ\text{C}$	25	W
Junction Temperature	T_J		150	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

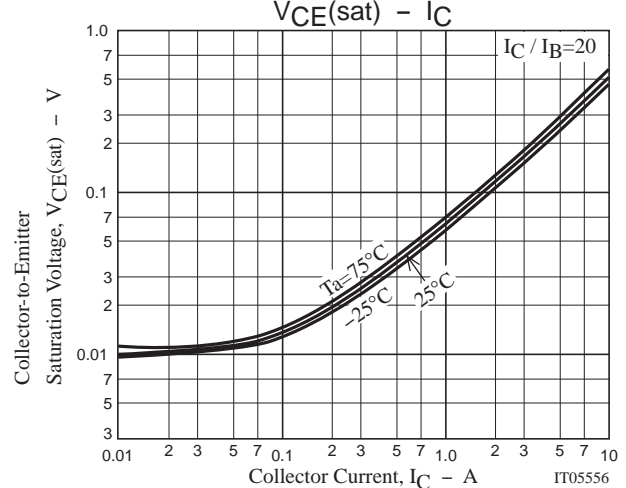
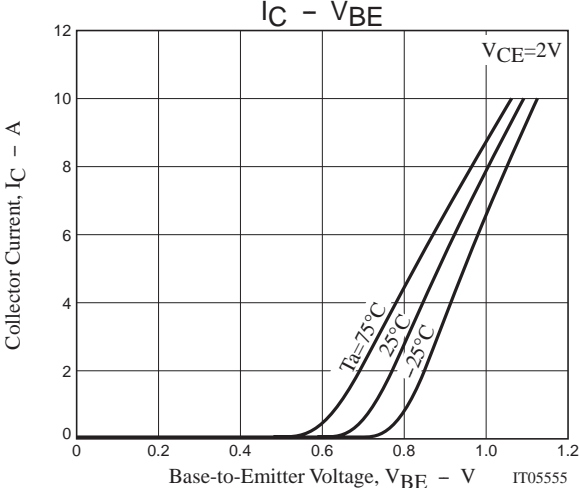
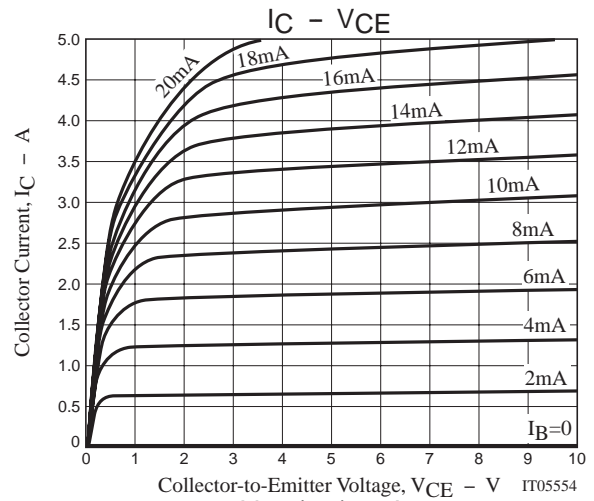
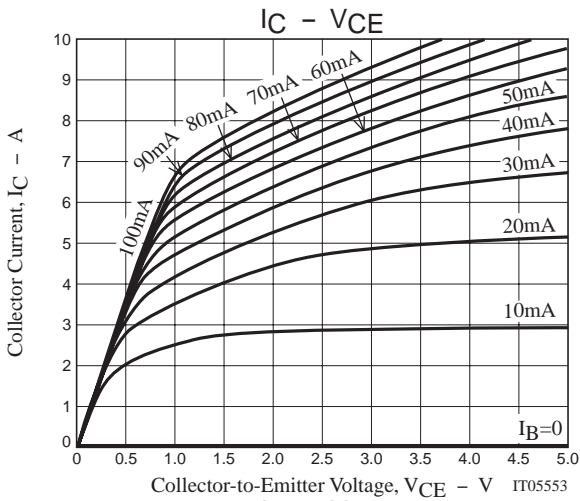
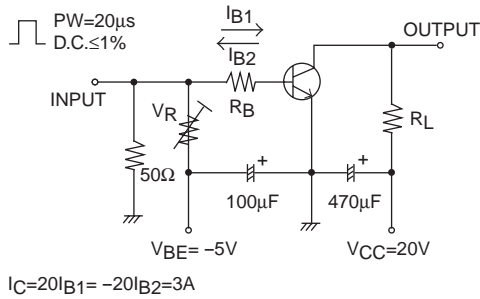
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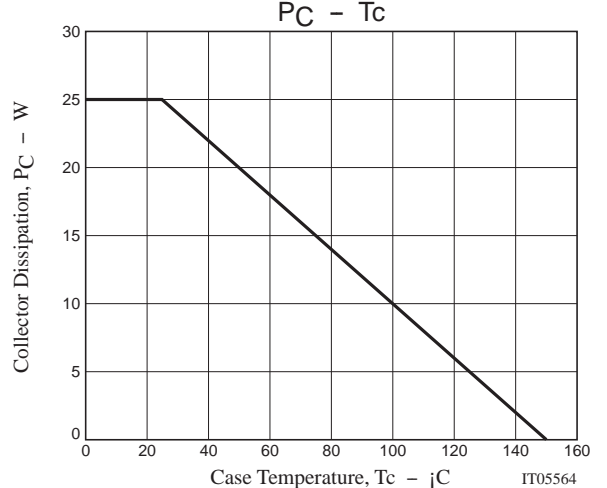
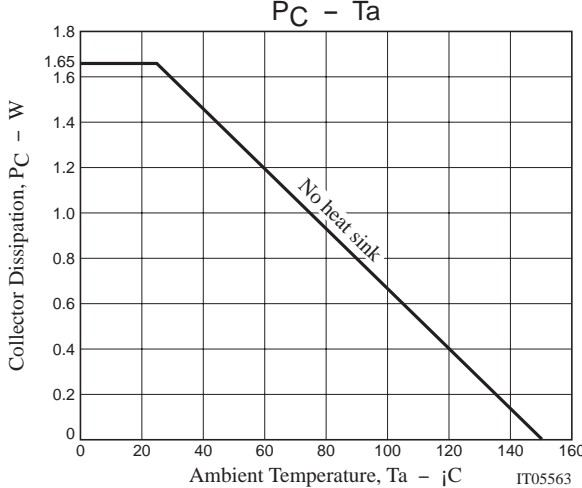
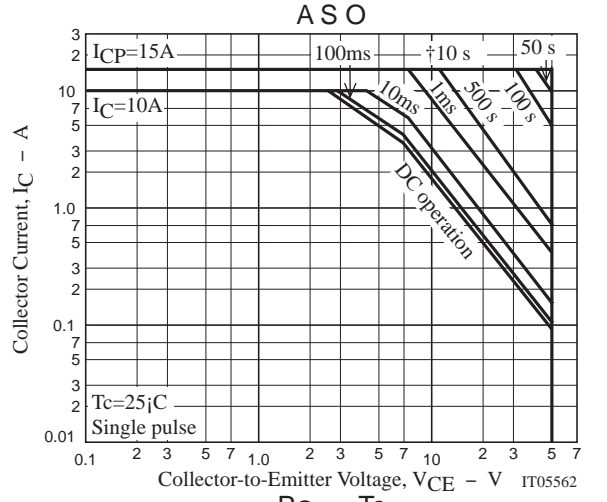
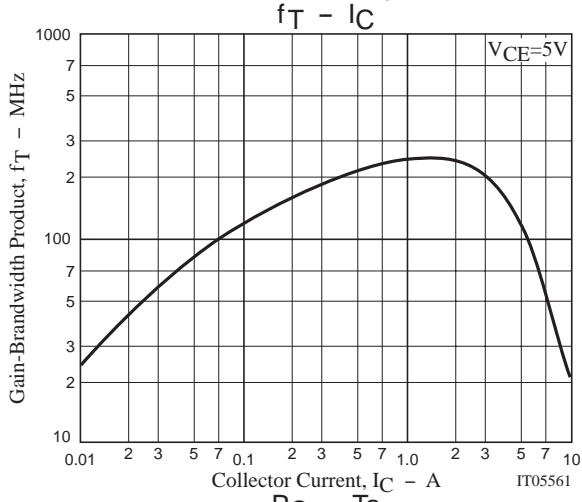
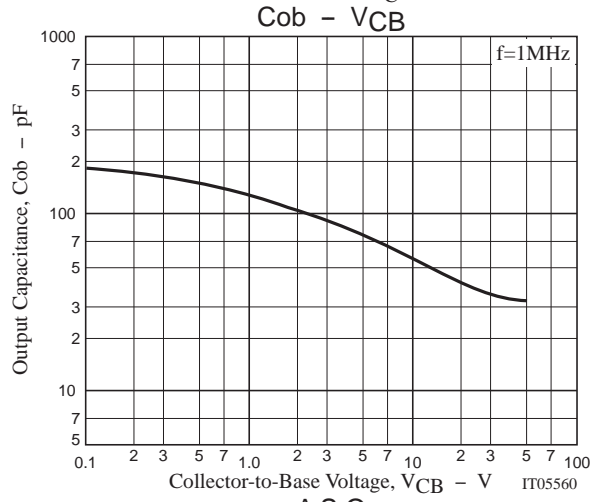
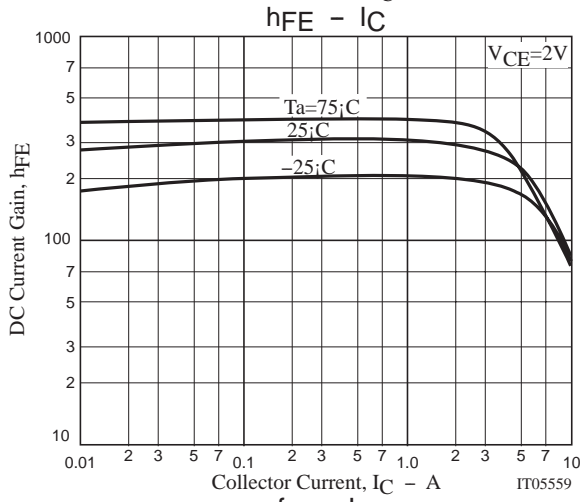
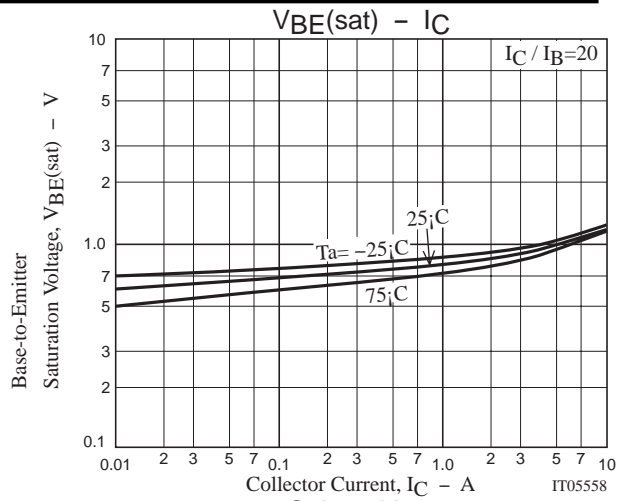
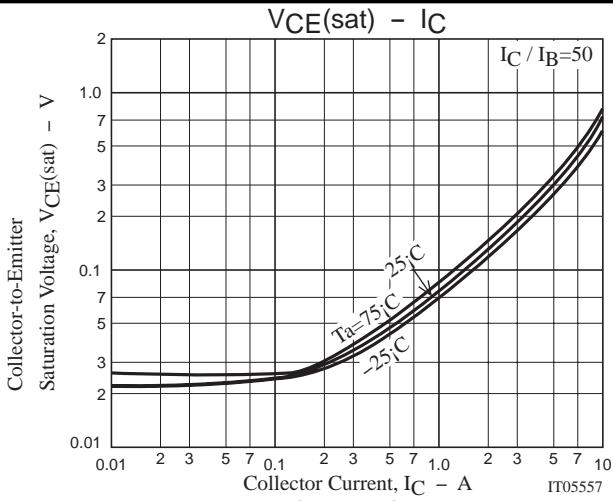
Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	ICBO	V _{CB} =40V, I _E =0			10	μA
Emitter Cutoff Current	IEBO	V _{EB} =4V, I _C =0			10	μA
DC Current Gain	h _{FE1}	V _{CE} =2V, I _C =1A	200		560	
	h _{FE2}	V _{CE} =2V, I _C =5A	100			
Gain-Bandwidth Product	f _T	V _{CE} =5V, I _C =1A		200		MHz
Output Capacitance	C _{ob}	V _{CB} =10V, f=1MHz		60		pF
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =5A, I _B =250mA		180	360	mV
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C =5A, I _B =250mA		0.93	1.4	V
Collector-to-Base Breakdown Voltage	V _{(BR)CBO}	I _C =100μA, I _E =0	120			V
Collector-to-Emitter Breakdown Voltage	V _{(BR)CES}	I _C =100μA, R _{BE} =0	120			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 =100μA, I _C =0	6			V
Turn-On Time	t _{on}	See specified test circuit.		40		ns
Storage Time	t _{stg}	See specified test circuit.		1000		ns
Fall Time	t _f	See specified test circuit.		80		ns

Swicthing Time Test Circuit



2SC5915



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