



2SC5681

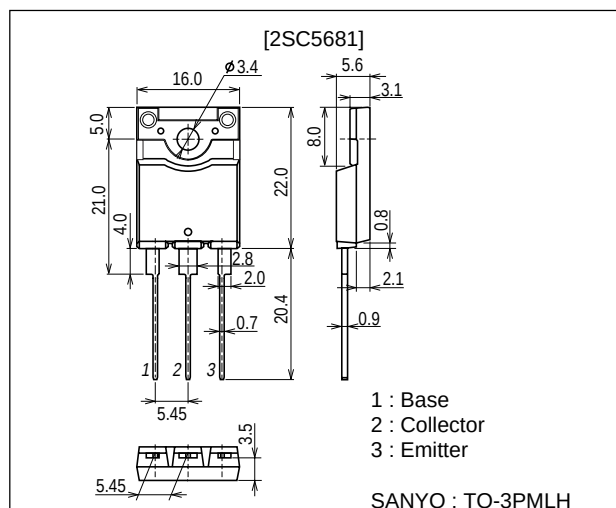
Features

- High speed.
- High breakdown voltage($V_{CBO}=1500V$).
- High reliability(Adoption of HVP process).
- Adoption of MBIT process.

Package Dimensions

unit : mm

2174A



Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		1500	V
Collector-to-Emitter Voltage	V_{CEO}		800	V
Emitter-to-Base Voltage	V_{EBO}		5	V
Collector Current	I_C		15	A
Collector Current (Pulse)	I_{CP}		35	A
Collector Dissipation	P_C		3.0	W
		$T_C=25^{\circ}\text{C}$	85	W
Junction Temperature	T_J		150	$^{\circ}\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^{\circ}\text{C}$

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

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=800V, I_E=0$			10	μA
Collector Cutoff Current	I_{CES}	$V_{CE}=1500V, R_{BE}=0$			1.0	mA
Collector Sustain Voltage	$V_{CEO(sus)}$	$I_C=100mA, I_B=0$	800			V
Emitter Cutoff Current	I_{EBO}	$V_{EB}=4V, I_C=0$			1.0	mA

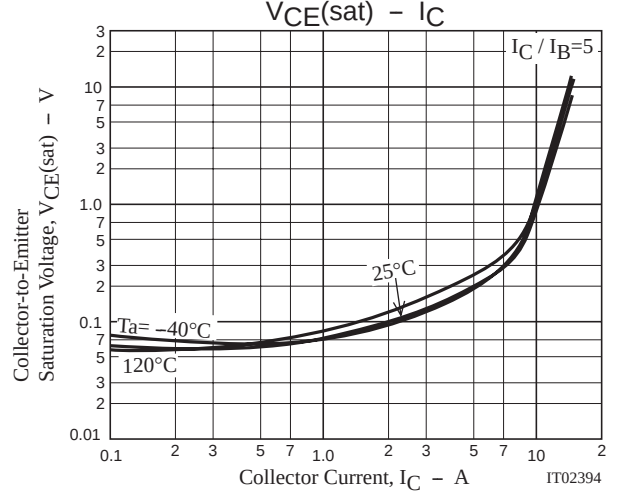
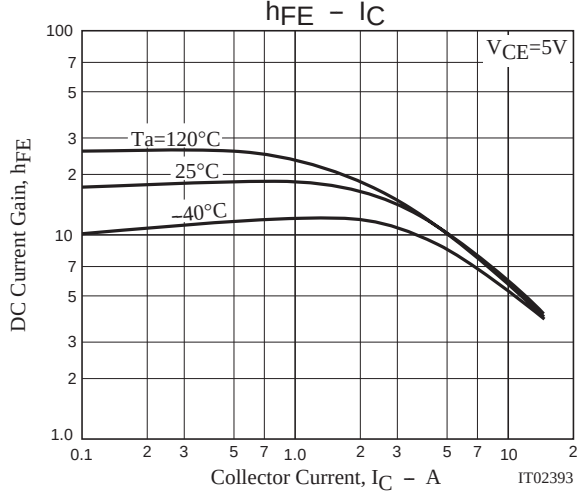
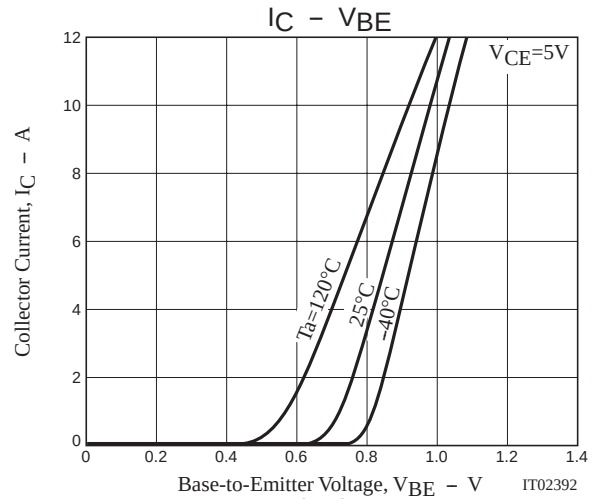
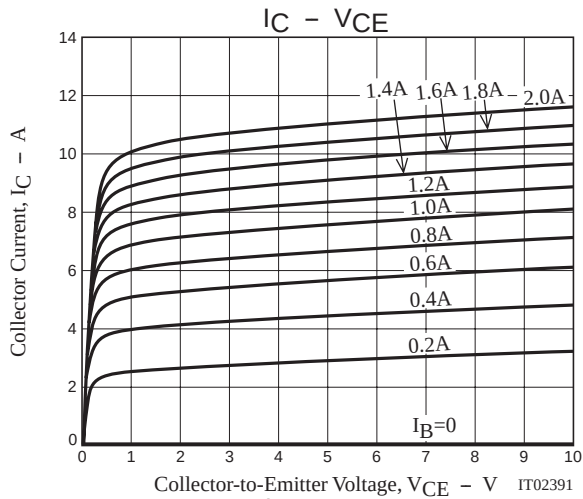
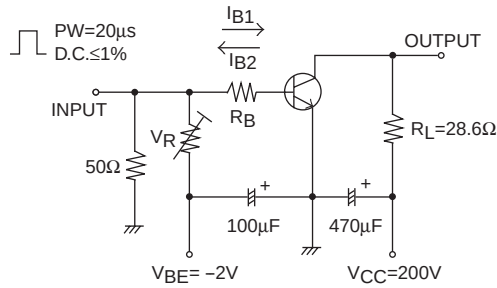
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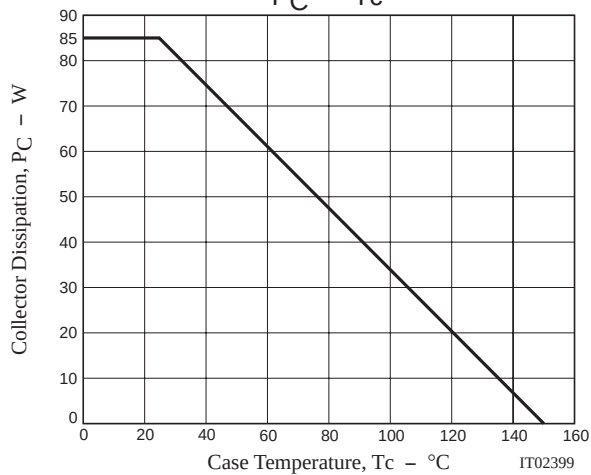
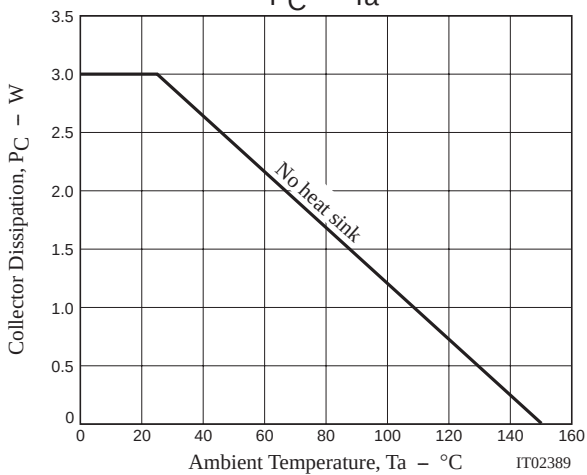
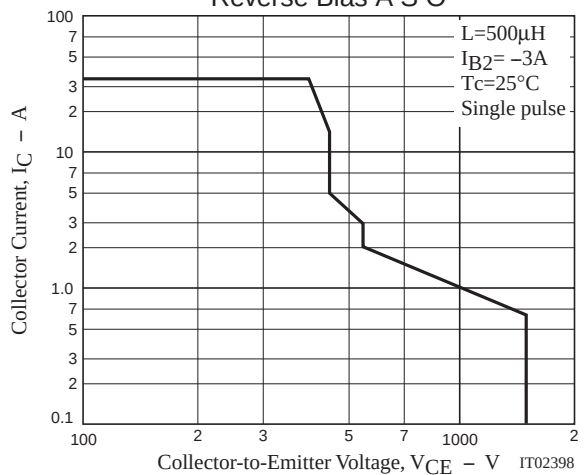
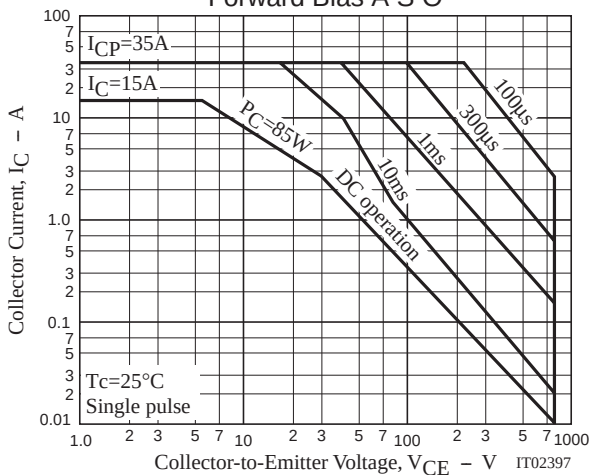
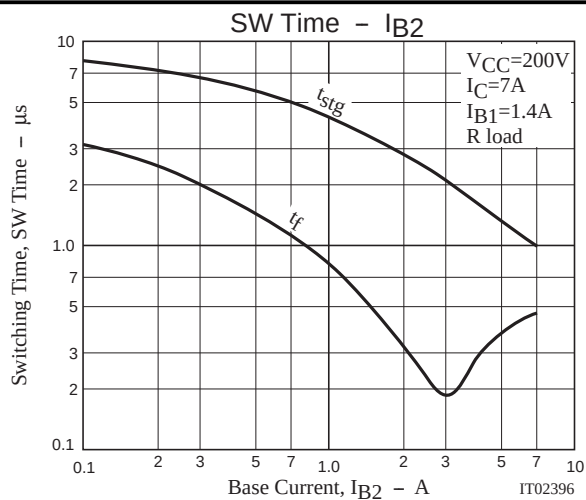
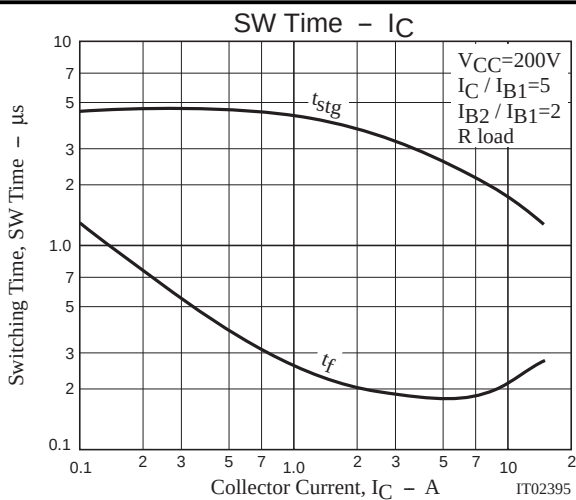
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
DC Current Gain	h_{FE1}	$V_{CE}=5V, I_C=1A$	15			
	h_{FE2}	$V_{CE}=5V, I_C=12A$	4		7	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=10.8A, I_B=2.7A$			3	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=10.8A, I_B=2.7A$			1.5	V
Storage Time	t_{stg}	$I_C=7A, I_{B1}=1.4A, I_{B2}=-2.8A$			3.0	μs
Fall Time	t_f	$I_C=7A, I_{B1}=1.4A, I_{B2}=-2.8A$			0.2	μs

Switching Time Test Circuit





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