

NPN Triple Diffused Planar Silicon Transistor

**2SC5683**

## Ultrahigh-Definition CRT Display Horizontal Deflection Output Applications

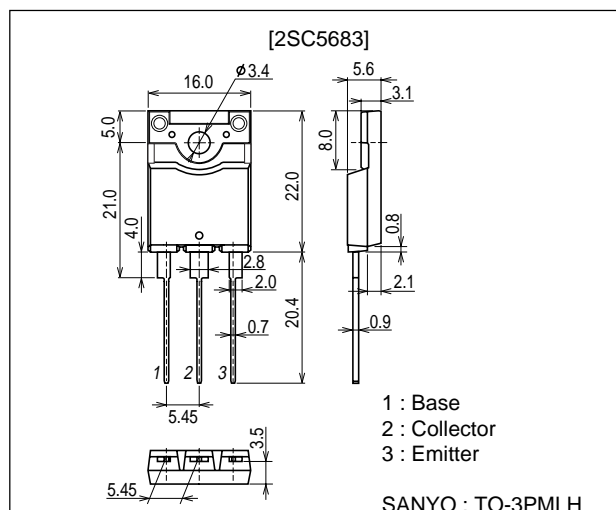
### Features

- 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  $T_a=25^\circ C$ 

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	$I_C$		25	A
Collector Current (Pulse)	$I_{CP}$		50	A
Collector Dissipation	$P_C$	$T_c=25^\circ C$	3.0	W
Junction Temperature	$T_J$		100	W
Storage Temperature	$T_{stg}$		-55 to +150	$^\circ C$

Electrical Characteristics at  $T_a=25^\circ C$ 

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=800V, I_E=0$			10	$\mu A$
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

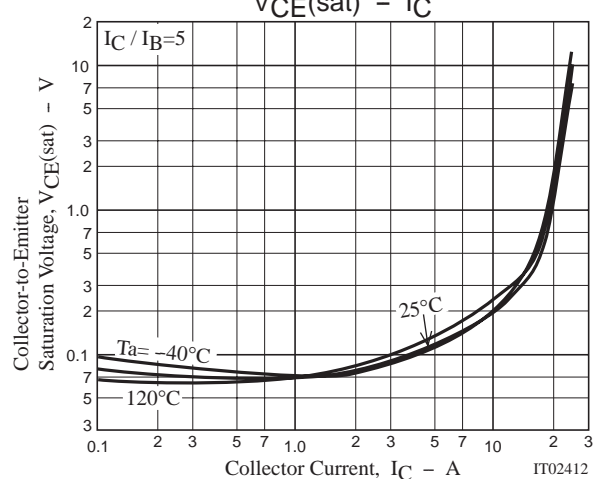
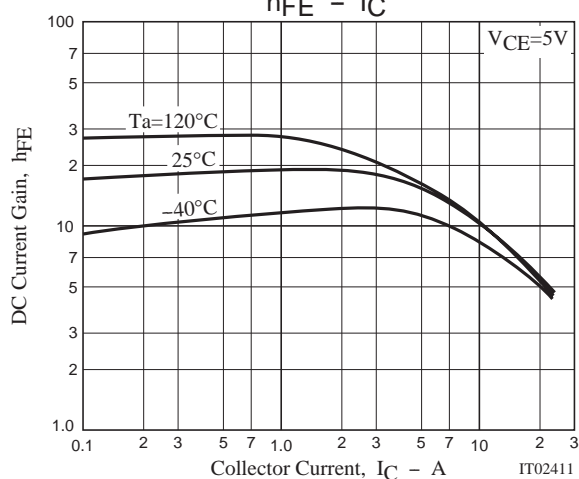
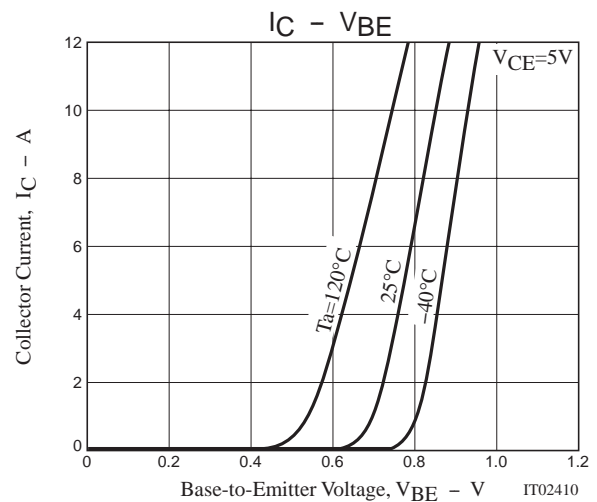
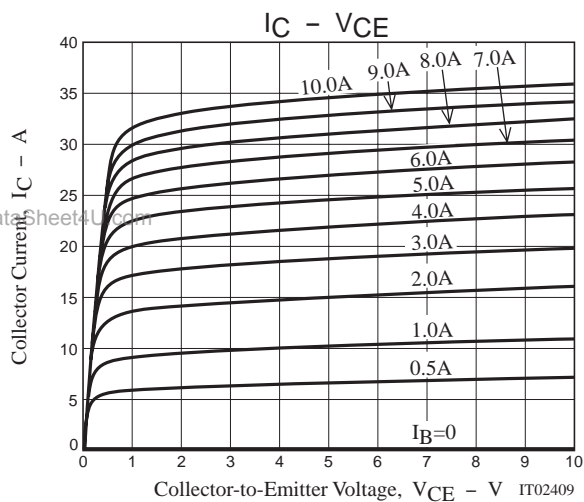
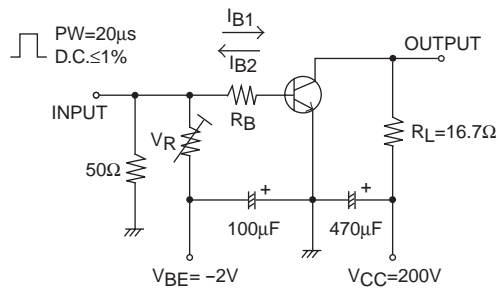
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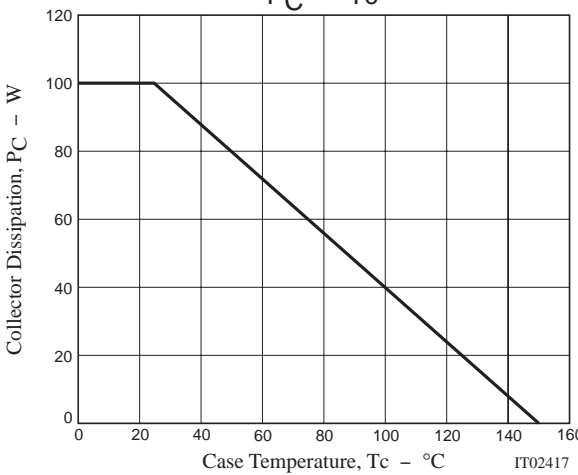
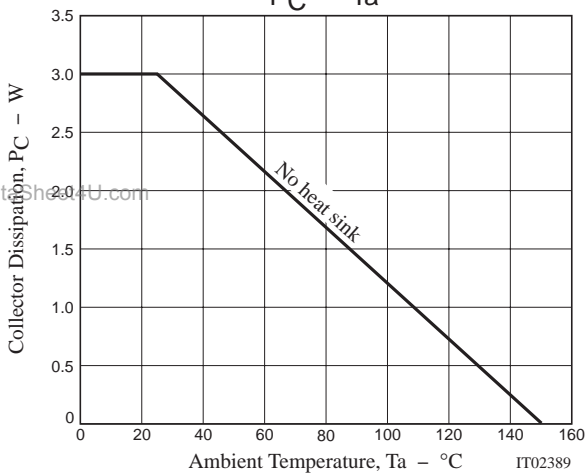
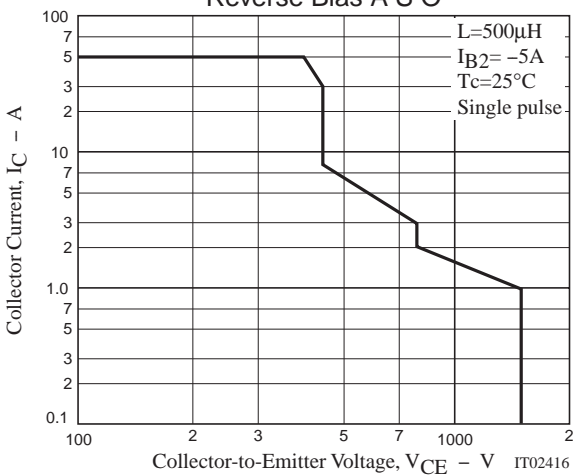
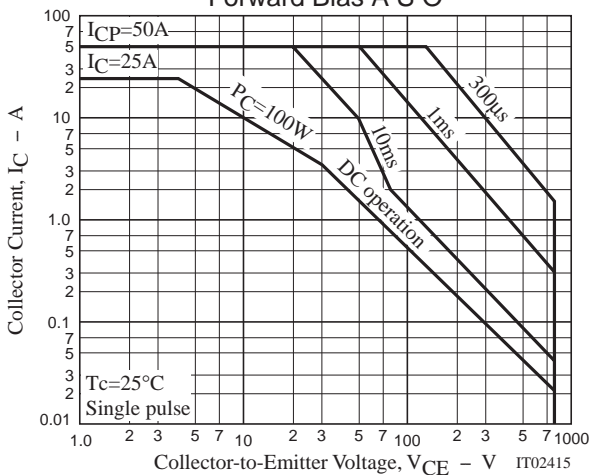
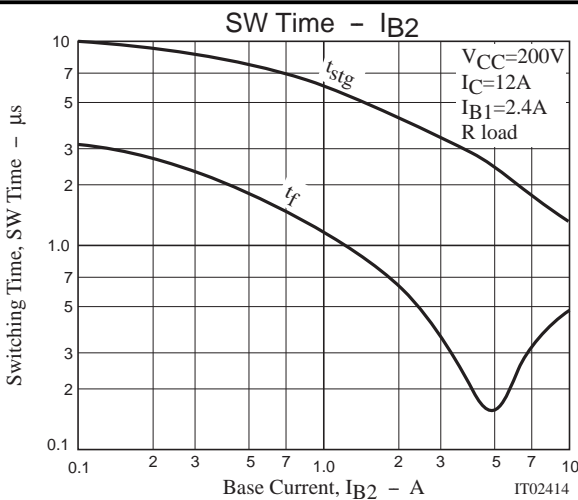
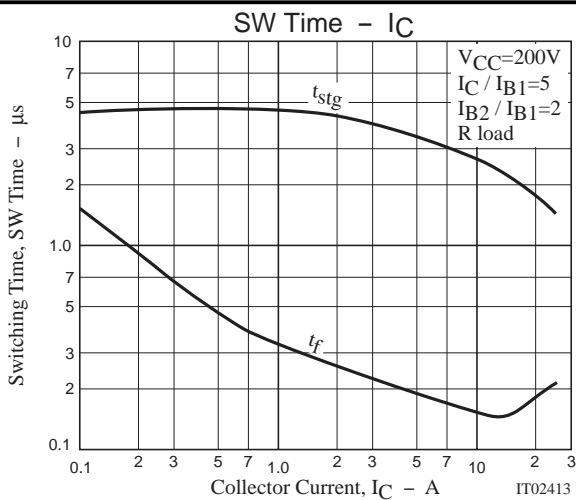
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
DC Current Gain	$h_{FE1}$	$V_{CE}=5V, I_C=1A$	15			
	$h_{FE2}$	$V_{CE}=5V, I_C=20A$	4		7	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=18A, I_B=4.5A$			3	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=18A, I_B=4.5A$			1.5	V
Storage Time	$t_{stg}$	$I_C=12A, I_{B1}=2.4A, I_{B2}=-4.8A$			3.0	$\mu s$
Fall Time	$t_f$	$I_C=12A, I_{B1}=2.4A, I_{B2}=-4.8A$			0.2	$\mu s$

## Switching Time Test Circuit





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