Ordering number : ENN6896

NPN Triple Diffused Planar Silicon Transistor

2SC5690

Ultrahigh-Definition CRT Display Horizontal Deflection Output Applications

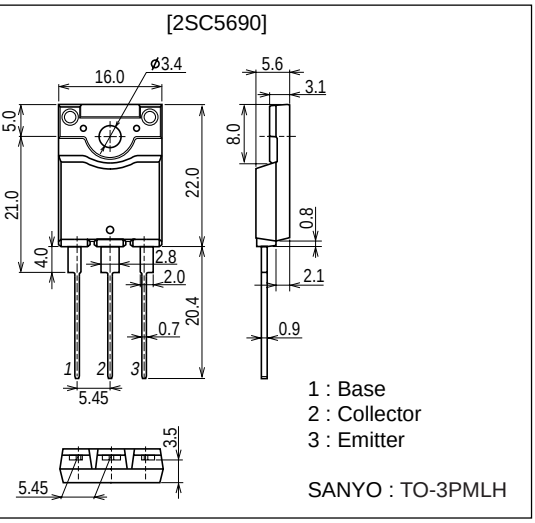
Features

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

Package Dimensions

unit : mm

2174



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
		Tc=25°C	85	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	V_{CB}=800V, I_E=0			10	μA
	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	40		130	mA
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
DC Current Gain	h_{FE}1	V_{CE}=5V, I_C=1A	10			
	h_{FE}2	V_{CE}=5V, I_C=12A	4		7	

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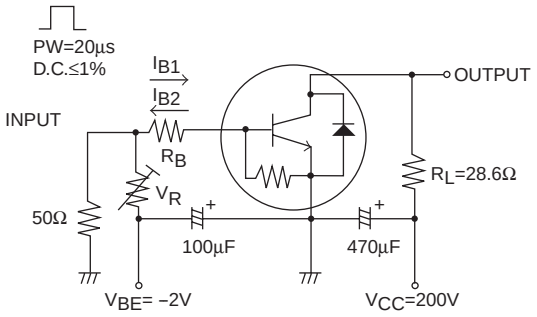
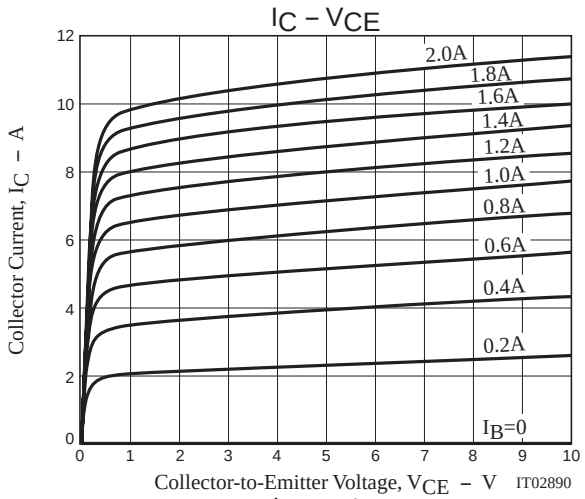
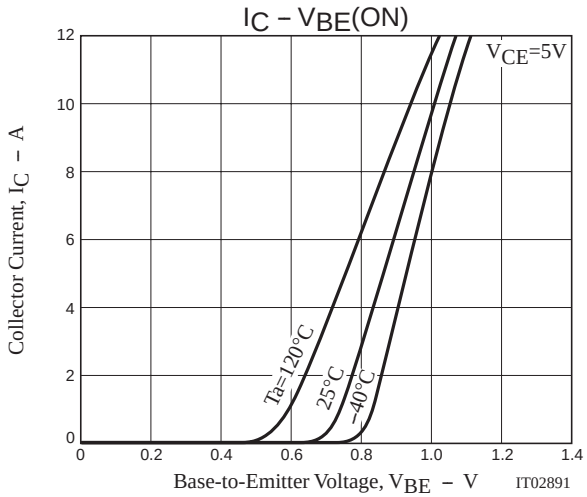
Continued from preceding page.

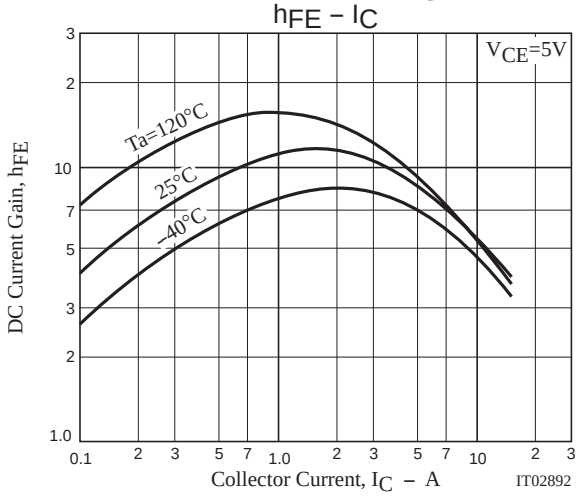
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Diode Forward Voltage	V_F	I_{EC}=12A			2	V
Storage Time	t_{stg}	I_C=7A, I_{B1}=1.4A, I_{B2}=–2.8A			3.0	μs
Fall Time	t_f	I_C=7A, I_{B1}=1.4A, I_{B2}=–2.8A			0.2	μs

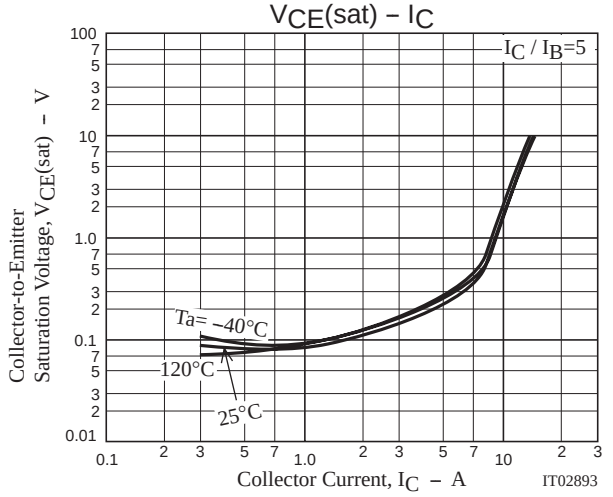
Switching Time Test Circuit



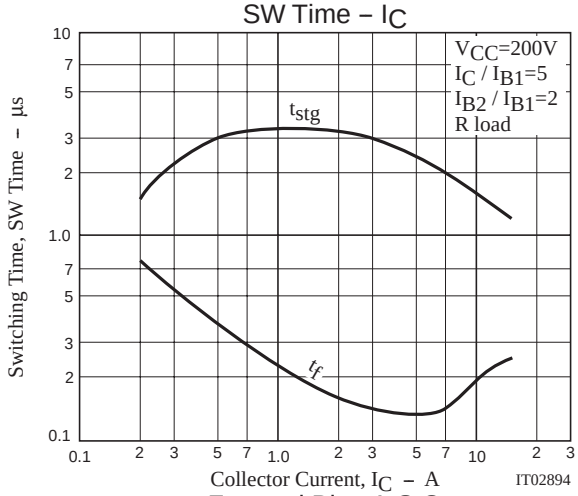




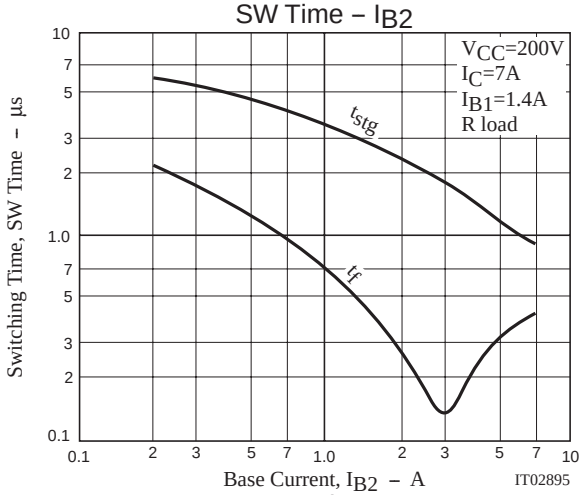




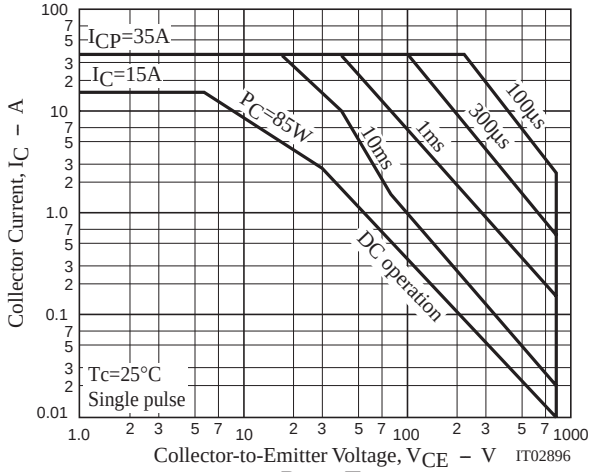
SW Time – I_C



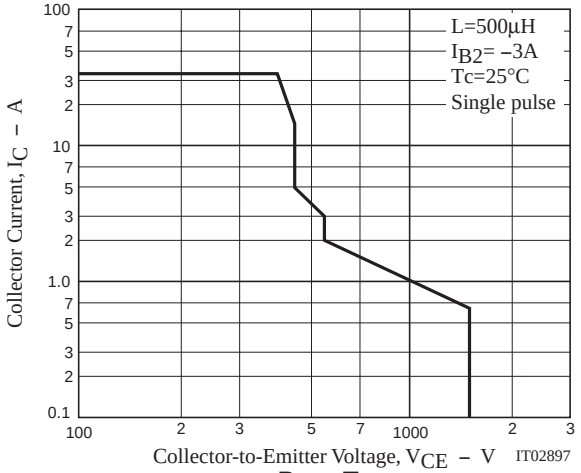
SW Time – I_{B2}



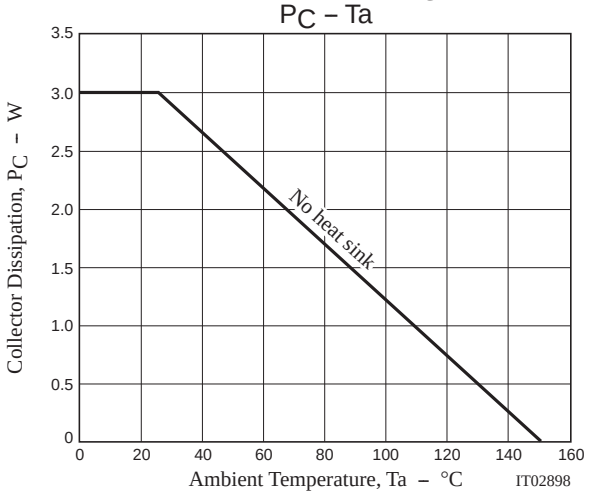
Forward Bias A S O



Reverse Bias A S O



P_C – Ta



P_C – Tc