Ordering number : ENN6990

NPN Triple Diffused Planar Silicon Transistor

2SC5776

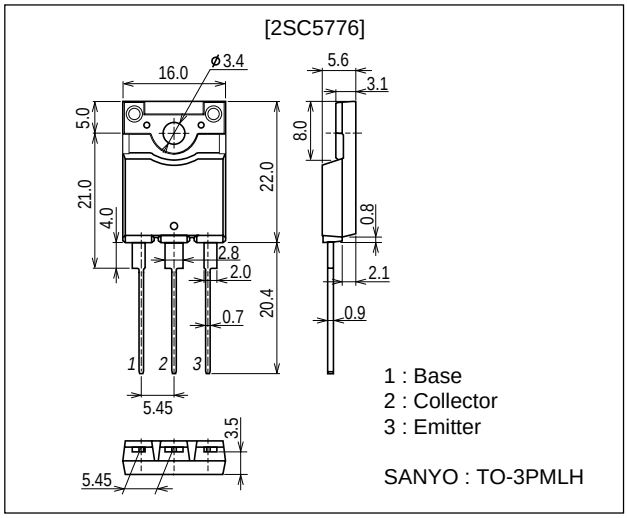
Ultrahigh-Definition CRT Display Horizontal Deflection Output Applications

Features

- High speed.
- High breakdown voltage (V_{CBO}=1600V).
- High reliability (Adoption of HVP process).
- Adoption of MBIT process.
- On-chip damper diode.

Package Dimensions

unit : mm
2174A



Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		1600	V
Collector-to-Emitter Voltage	V_{CEO}		800	V
Emitter-to-Base Voltage	V_{EBO}		5	V
Collector Current	I_C		8	A
Collector Current (Pulse)	I_{CP}		16	A
Collector Dissipation	P_C		3.0	W
		Tc=25°C	65	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}=1600V, R_{BE}=0			1.0	mA
Emitter Cutoff Current	I_{EBO}	V_{EB}=4V, I_C=0	40		200	mA

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SANYO Electric Co.,Ltd. Semiconductor Company
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

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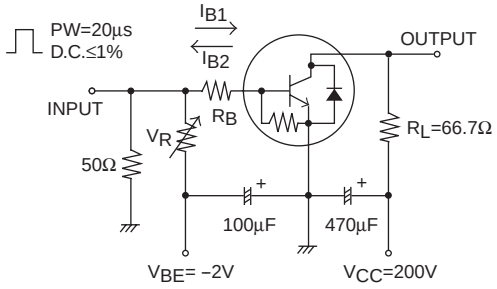
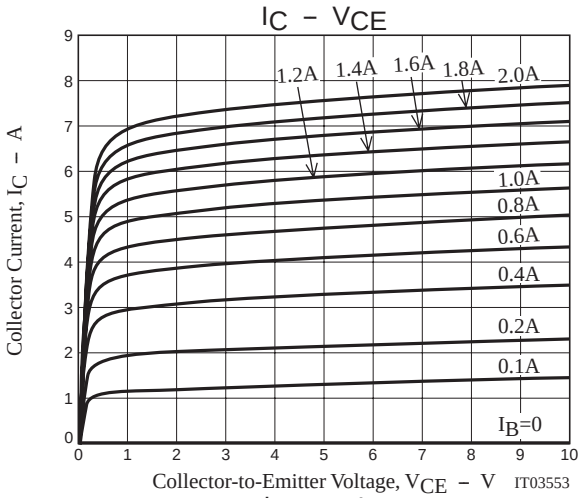
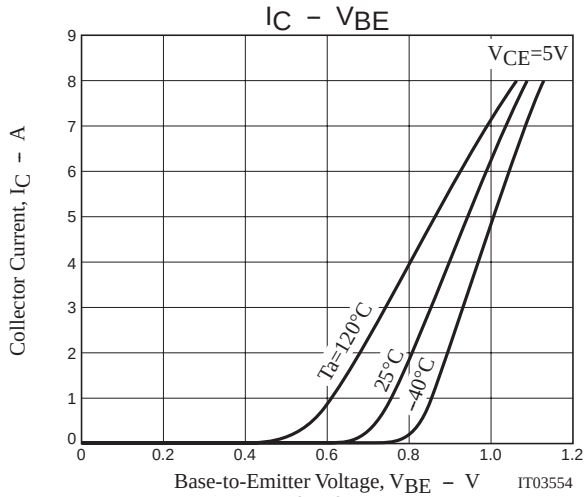
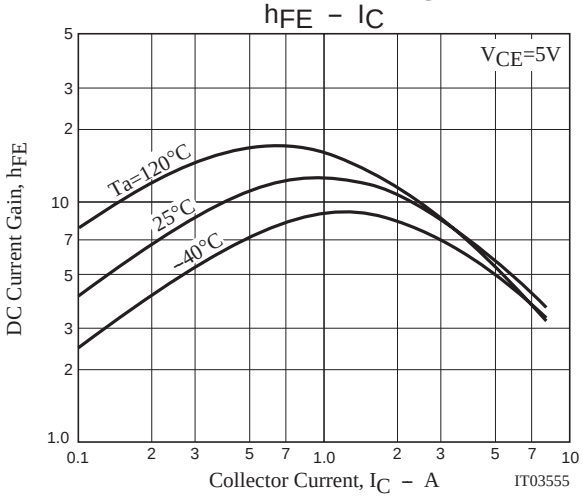
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
DC Current Gain	$h_{FE}1$	V_{CE}=5V, I_C=1A	8			
	$h_{FE}2$	V_{CE}=5V, I_C=4.5A	4		7	
Collector-to-Emitter Saturation Voltage	V_{CE}(sat)	I_C=4A, I_B=1A			3.0	V
Base-to-Emitter Saturation Voltage	V_{BE}(sat)	I_C=4A, I_B=1A			1.5	V
Storage Time	t_{stg}	I_C=3A, I_{B1}=0.5A, I_{B2}=−1.5A			3.0	μs
Fall Time	t_f	I_C=3A, I_{B1}=0.5A, I_{B2}=−1.5A			0.2	μs
Diode Forward Voltage	V_F	I_{EC}=6.5A			2.2	V

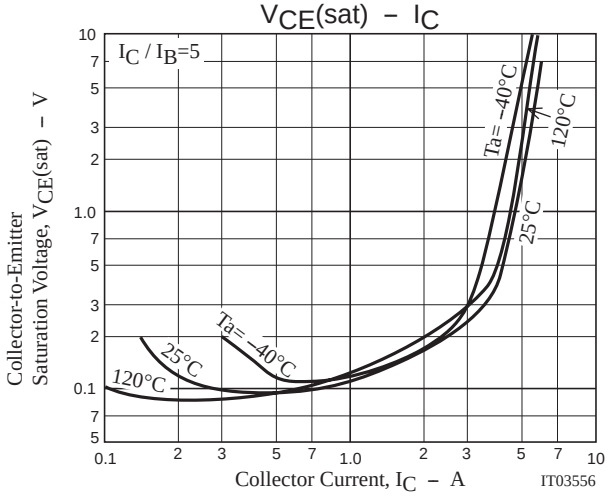
Switching Time Test Circuit



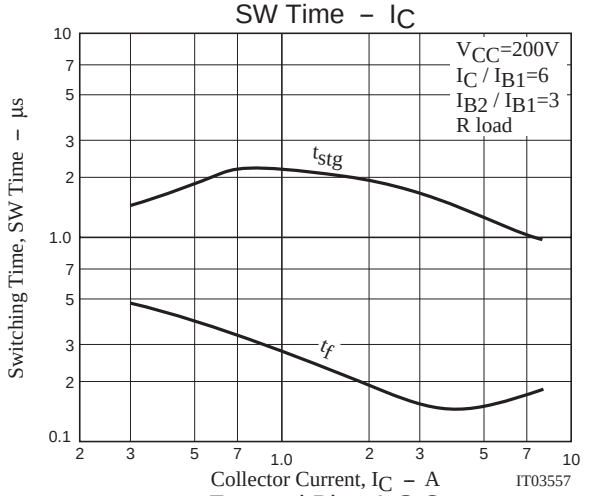




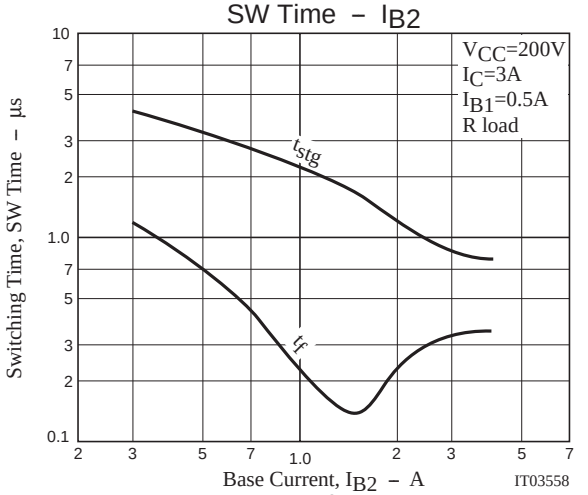




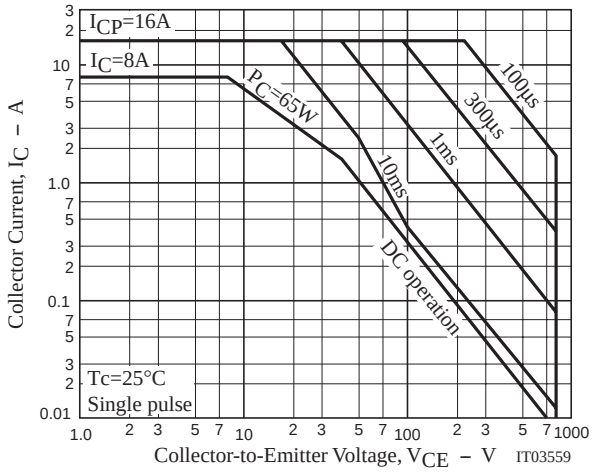
SW Time – I_C



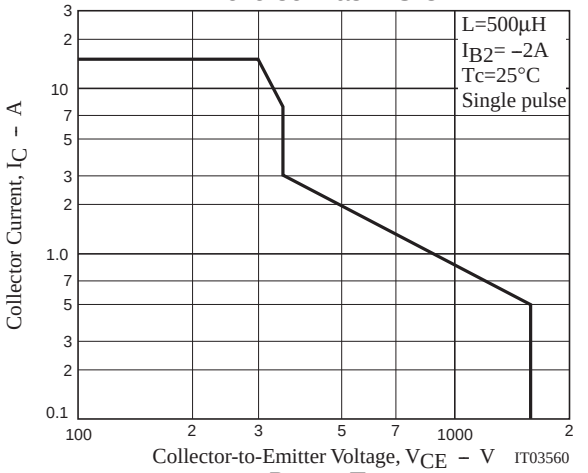
SW Time – I_{B2}



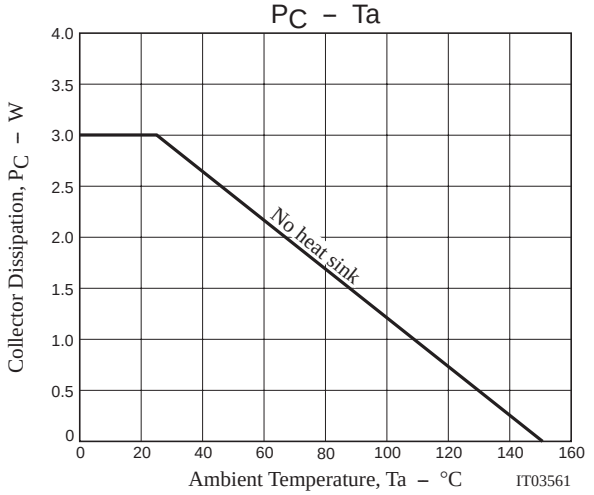
Forward Bias A S O



Reverse Bias A S O



P_C – Ta



P_C – Tc