

SANYO Semiconductors
DATA SHEET

2SC3998

NPN Triple Diffused Planar Silicon Transistor
— Ultrahigh-Definition CRT Display
Horizontal Deflection Output Applications

Features

- High speed (t_f ~100ns typ).
- High breakdown voltage (V_{CBO} ~1500V).
- High reliability (adoption of HVP process).
- Adoption of MBIT process.

Specifications

Absolute Maximum Ratings at T_a ~25°C

Parameter	Symbol	Conditions	Rating	Unit
Collector-to-Base Voltage	V_{CBO}		1500	V
Collector-to-Emitter Voltage	V_{CEO}		800	V
Emitter-to-Base Voltage	V_{EBO}		8	V
Collector Current	I_C		25	A
Collector Current (Pulse)	I_{CP}		50	A
Collector Dissipation	P_C	T_a ~25°C	3.5	W
Junction Temperature	T_J		250	W
Storage Temperature	T_{stg}		150	°C
			-55 to +150	°C

Electrical Characteristics at T_a ~25°C

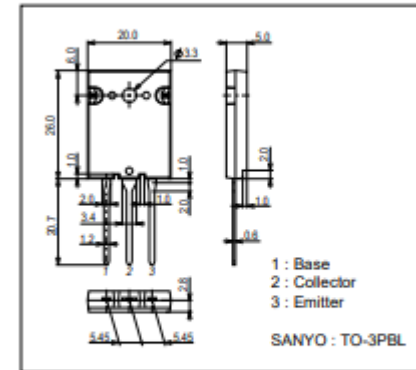
Parameter	Symbol	Conditions	Rating			Unit
			min	typ	max	
Collector Cutoff Current	I_{CES}	V_{CE} ~1500V			1.0	mA
Collector-to-Emitter Sustain Voltage	$V_{CE(sat)}$	I_C ~100mA, I_B ~0A	800			V
Emitter Cutoff Current	I_{EBO}	V_{EB} ~4V, I_C ~0A			1.0	mA
Collector Cutoff Current	I_{CBO}	V_{CB} ~800V, I_E ~0A			10	μ A
DC Current Gain	h_{FE1}	V_{CE} ~5V, I_C ~1.0A	8		30	
	h_{FE2}	V_{CE} ~5V, I_C ~20A	4		8	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C ~20A, I_B ~5A			5	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C ~20A, I_B ~5A			1.5	V
Storage Time	t_{stg}	I_C ~12A, I_{B1} ~2.4A, I_{B2} ~4.8A			3.0	μ s
Fall Time	t_f	I_C ~12A, I_{B1} ~2.4A, I_{B2} ~4.8A			0.2	μ s

■ Any and all SANYO Semiconductor products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, or other applications whose failure can be reasonably expected to result in serious physical and/or material damage. Consult with your SANYO Semiconductor representative nearest you before using any SANYO Semiconductor products described or contained herein in such applications.

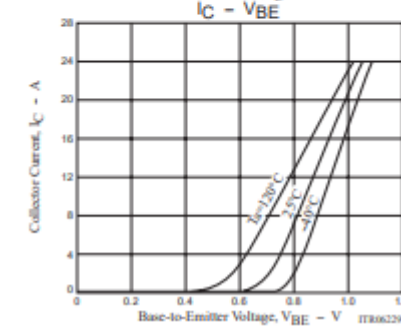
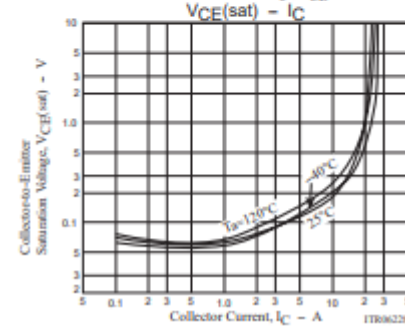
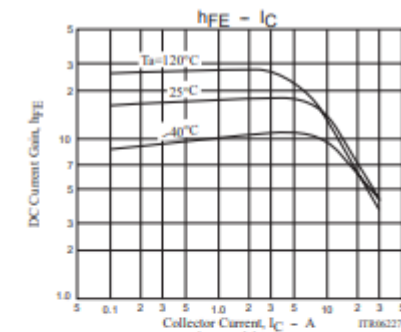
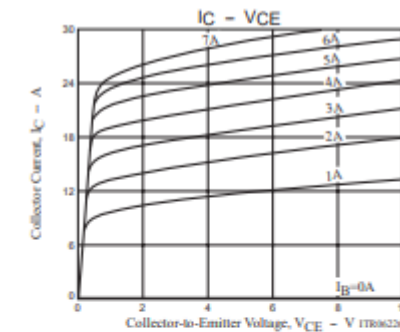
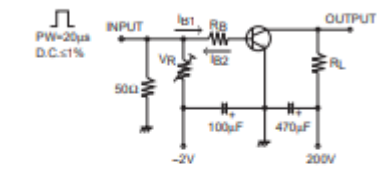
■ SANYO Semiconductor assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all SANYO Semiconductor products described or contained herein.

Package Dimensions

unit : mm (typ)
7502-001



Switching Time Test Circuit



2SC3998

