Ordering number :EN5960

NPN Triple Diffused Planar Silicon Transistor

TS7990

Ultrahigh-Definition CRT Display Horizontal Deflection Output Applications

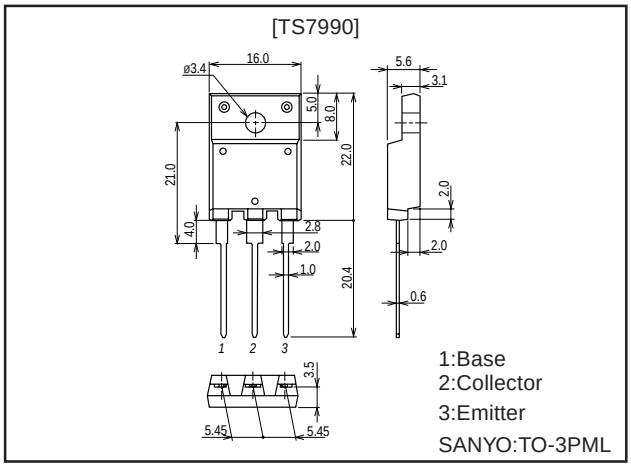
Features

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

Package Dimensions

unit:mm

2039D-TO3PML



Specifications

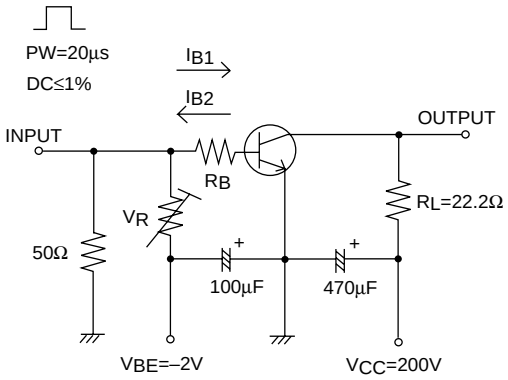
Absolute Maximum Ratings at Ta = 25˚C

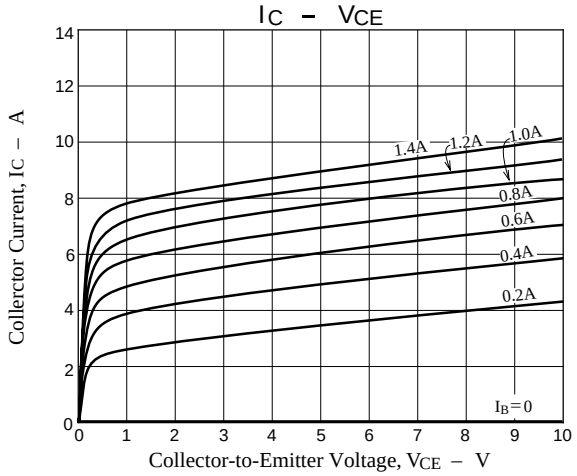
Parameter	Symbol	Conditions	Ratings	Unit
Colletctor-to-Base Voltage	V_{CBO}		1600	V
Colletctor-to-Emitter Voltage	V_{CEO}		800	V
Emitter-to-Base Voltage	V_{EBO}		6	V
Collector Current	I_C		15	A
Collector Current (Pulse)	I_{CP}		35	A
Collector Dissipation	P_C		3.0	W
		Tc=25˚C	75	W
Junction Temperature	Tj		150	˚C
Storage Temperature	Tstg		–55 to +150	˚C

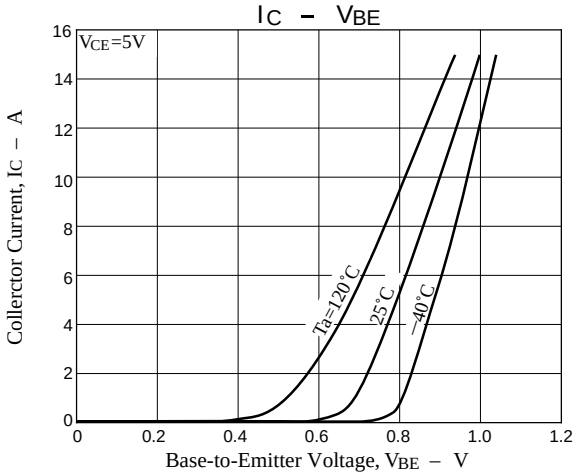
Electrical Characteristics at Ta = 25˚C

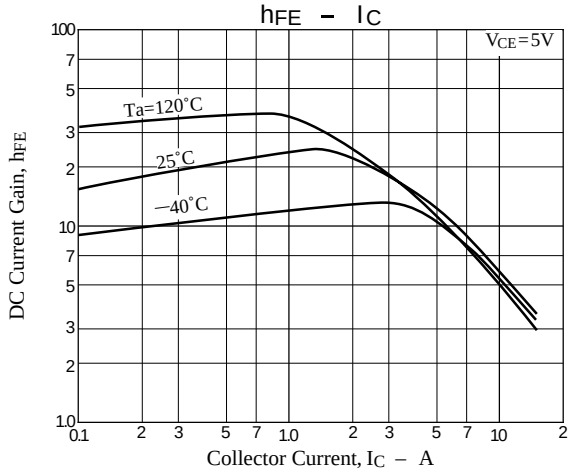
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CES}	V_{CE}=1600V, R_{BE}=0			1.0	mA
Collector Sustain Voltage	$V_{CEO(SUS)}$	I_C=100mA, I_B=0	800			V
Emitter Cutoff Current	I_{EBO}	V_{EB}=4V, I_C=0			1.0	mA
Collector Cutoff Current	I_{CBO}	V_{CB}=800V, I_E=0			10	µA
DC Current Gain	$h_{FE(1)}$	V_{CE}=5V, I_C=1.0A	15		30	
	$h_{FE(2)}$	V_{CE}=5V, I_C=11A	4		7	
C-E Saturation Voltage	$V_{CE(sat)}$	I_C=11A, I_B=2.75A			5	V
B-E Saturation Voltage	$V_{BE(sat)}$	I_C=11A, I_B=2.75A			1.5	V
Storage Time	t_{stg}	I_C=9A, I_{B1}=1.5A, I_{B2}=–3.75A			3.0	µs
Fall Time	t_f	I_C=9A, I_{B1}=1.5A, I_{B2}=–3.75A			0.2	µs

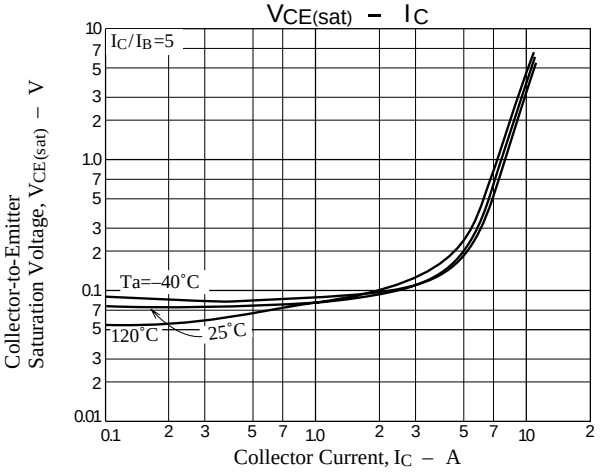
Switching Time Test Circuit

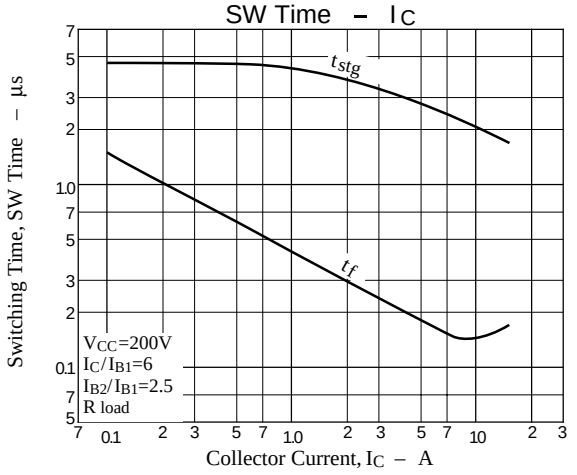


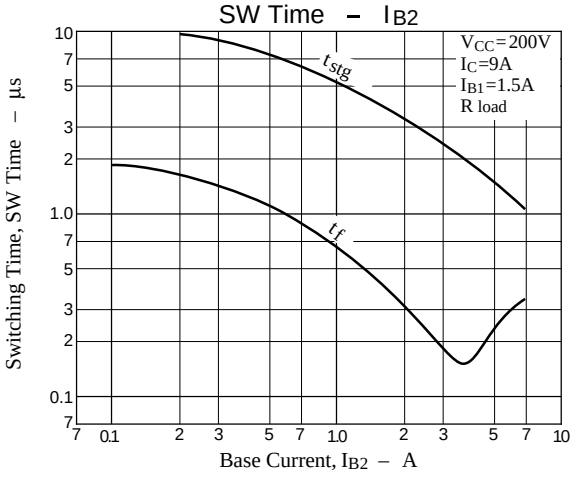




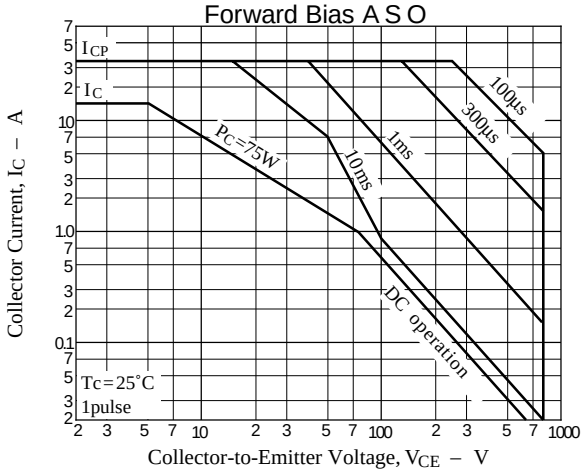




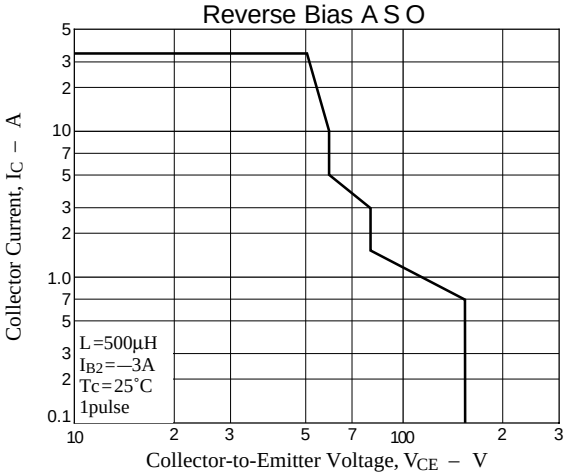




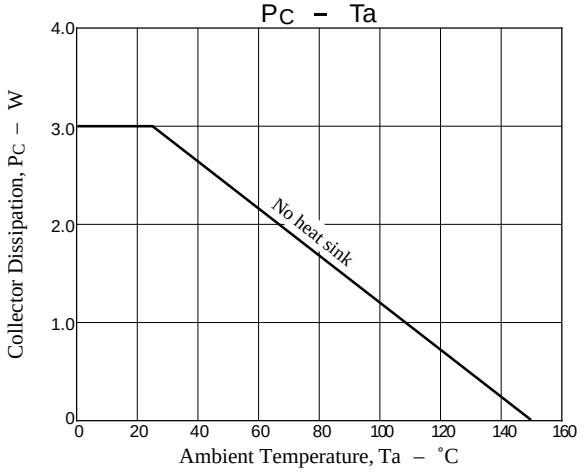
Forward Bias A S O



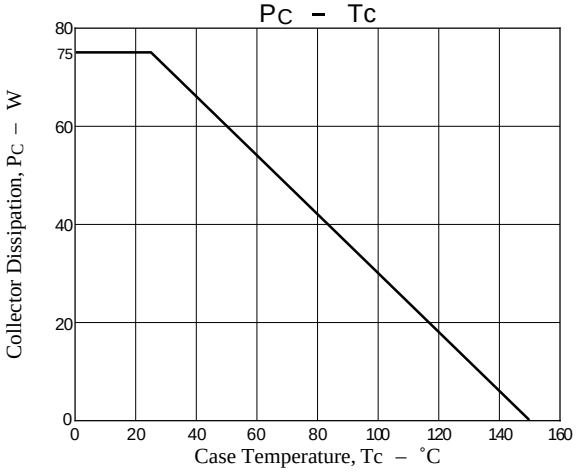
Reverse Bias A S O



PC – Ta



PC – Tc



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