

Ordering number :EN5959

NPN Triple Diffused Planar Silicon Transistor

TS7988



Ultrahigh-Definition CRT Display  
Horizontal Deflection Output Applications

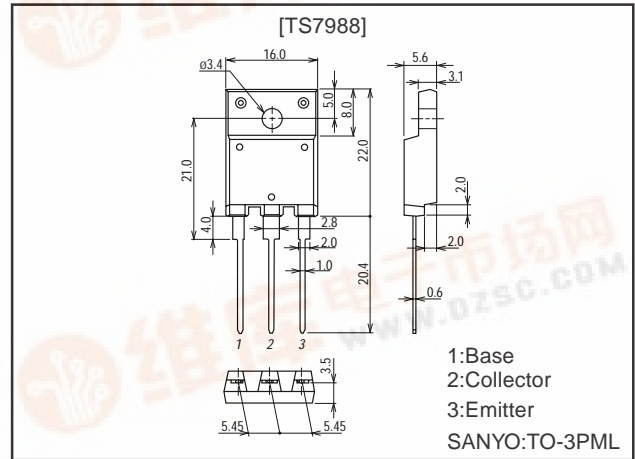
Features

- High speed.
- High breakdown voltage ( $V_{CB0}=1600V$ ).
- High reliability (Adoption of HVP process).
- Adoption of MBIT process.

Package Dimensions

unit:mm

2039D-TO3PML



Specifications

Absolute Maximum Ratings at  $T_a = 25^\circ C$

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	$V_{CB0}$		1600	V
Collector-to-Emitter Voltage	$V_{CEO}$		800	V
Emitter-to-Base Voltage	$V_{EBO}$		6	V
Collector Current	$I_C$		10	A
Collector Current (Pulse)	$I_{CP}$		25	A
Collector Dissipation	$P_C$		3.0	W
		$T_c=25^\circ C$	7.0	W
Junction Temperature	$T_j$		150	$^\circ C$
Storage Temperature	$T_{stg}$		-55 to +150	$^\circ C$

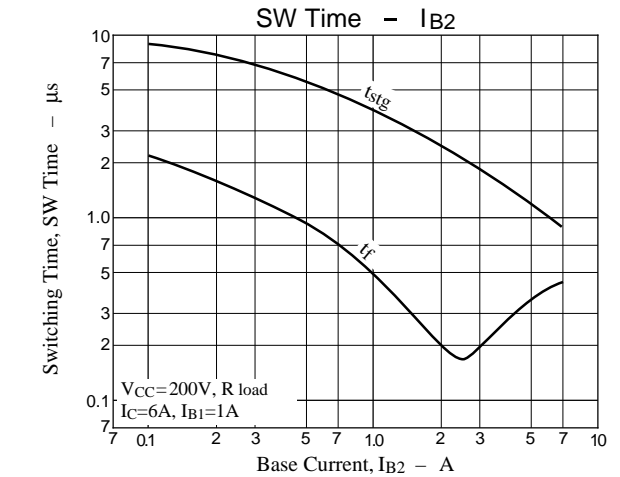
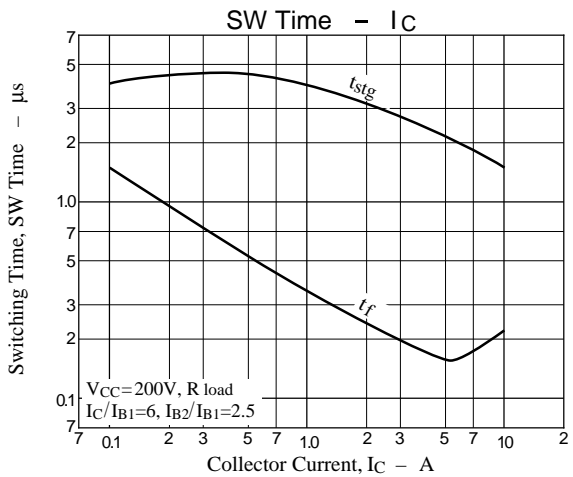
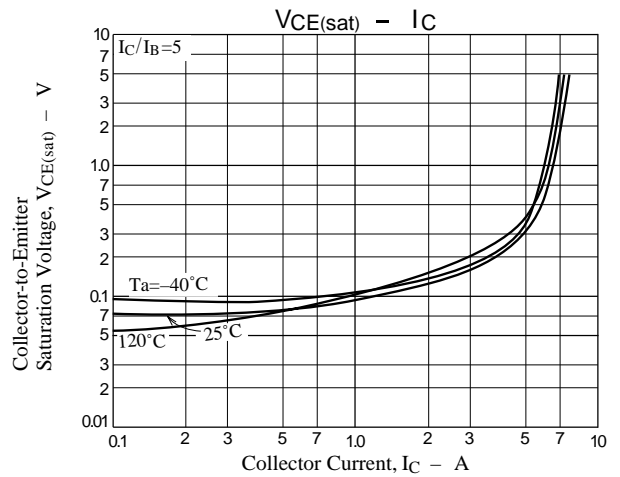
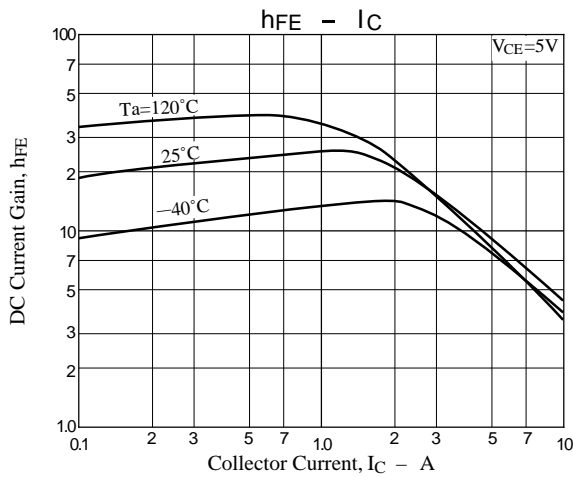
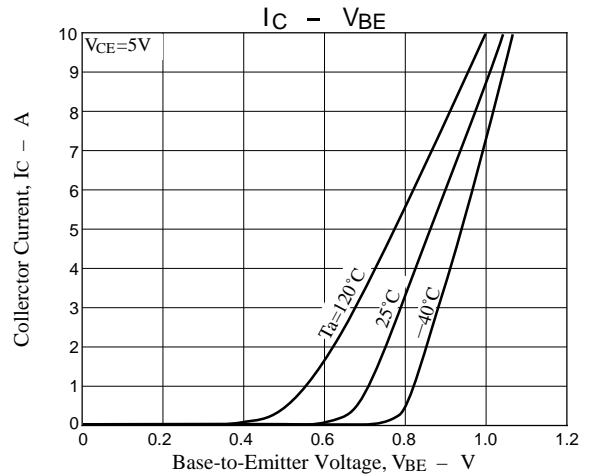
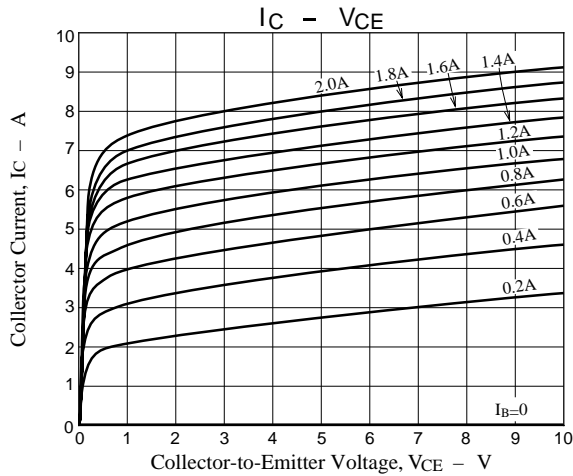
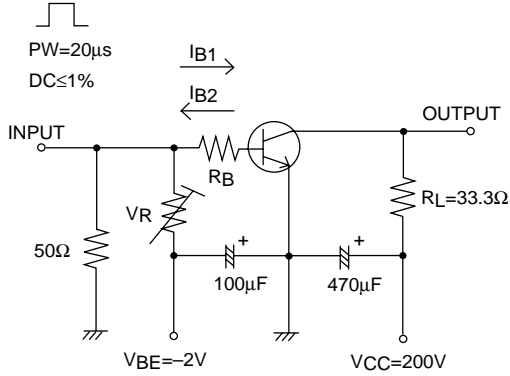
Electrical Characteristics at  $T_a = 25^\circ C$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CBO}$	$V_{CE}=800V, I_E=0$			10	$\mu A$
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
DC Current Gain	$h_{FE(1)}$	$V_{CE}=5V, I_C=1.0A$	15		30	
		$V_{CE}=5V, I_C=7A$	4		7	
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=7A, I_B=1.75A$			5	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=7A, I_B=1.75A$			1.5	V
Storage Time	$t_{stg}$	$I_C=6A, I_{B1}=1.0A, I_{B2}=-2.5A$			3.0	$\mu s$
Fall Time	$t_f$	$I_C=6A, I_{B1}=1.0A, I_{B2}=-2.5A$			0.2	$\mu s$

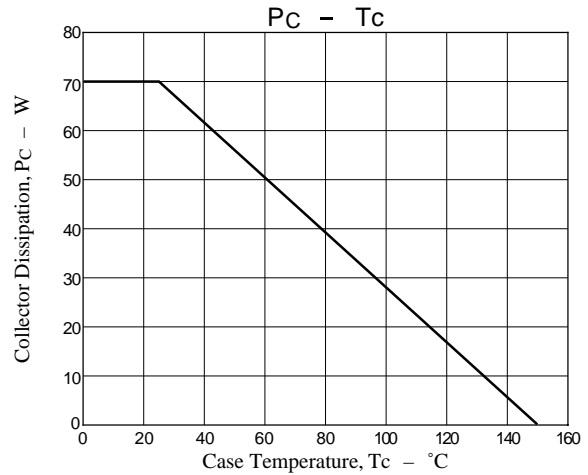
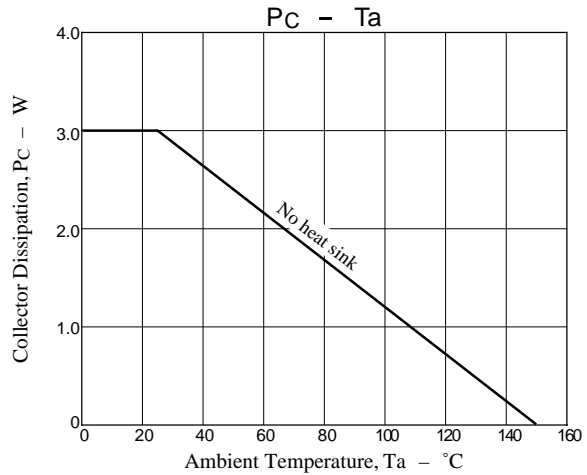
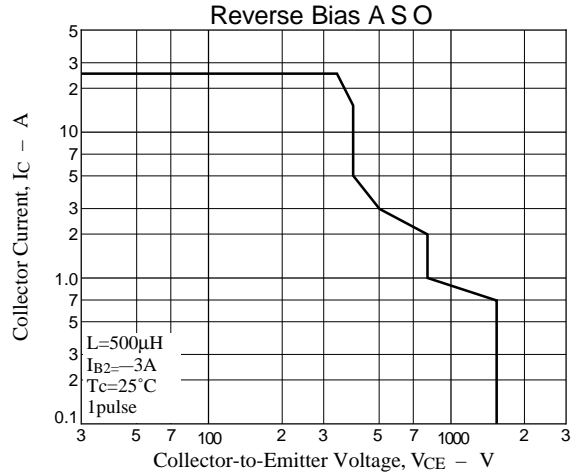
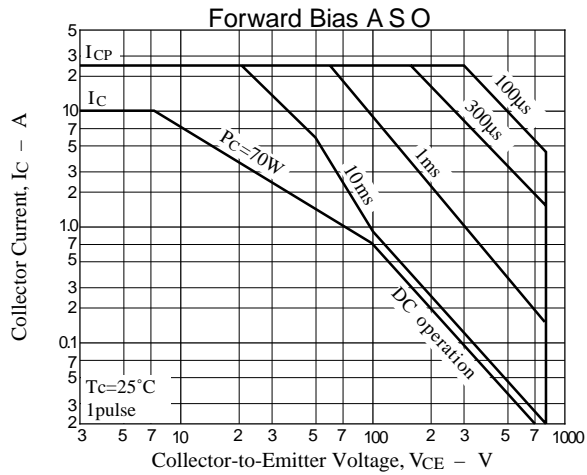


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## Switching Time Test Circuit



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