Ordering number : ENN7526

NPN Triple Diffused Planar Silicon Transistor

2SD2688LS

Color TV Horizontal Deflection Output Applications

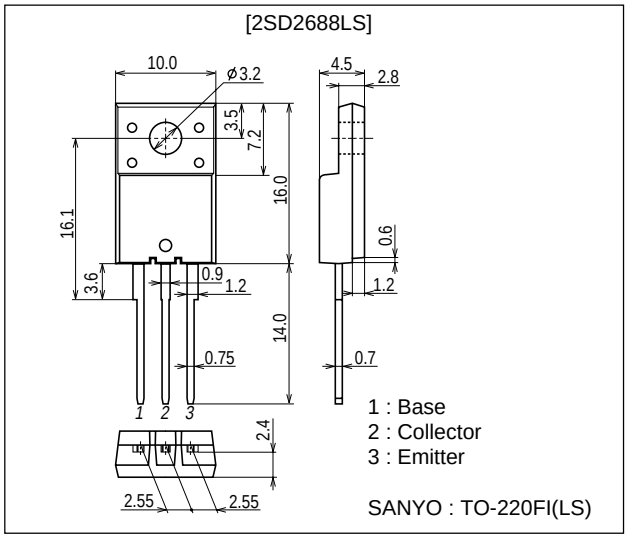
Features

- 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

2079D



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		10	A
Collector Current (Pulse)	I_{CP}		25	A
Collector Dissipation	P_C		2.0	W
		Tc=25°C	35	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
Collector Cutoff Current	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_{BE}=4V, I_C=0	40		130	mA

Continued on next page.

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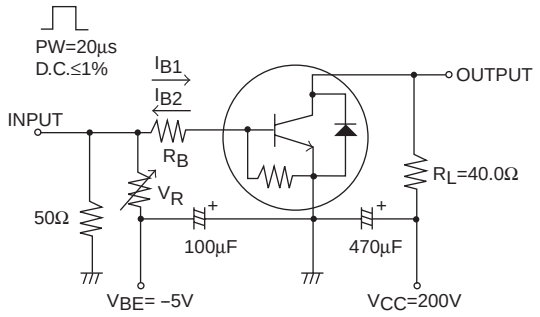
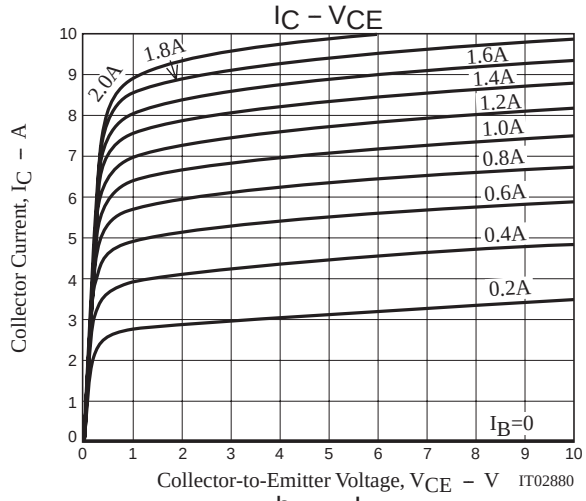
SANYO Electric Co.,Ltd. Semiconductor Company
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

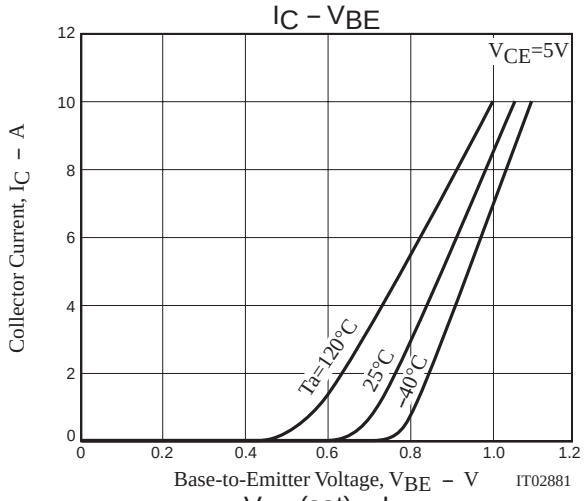
Continued from preceding page.

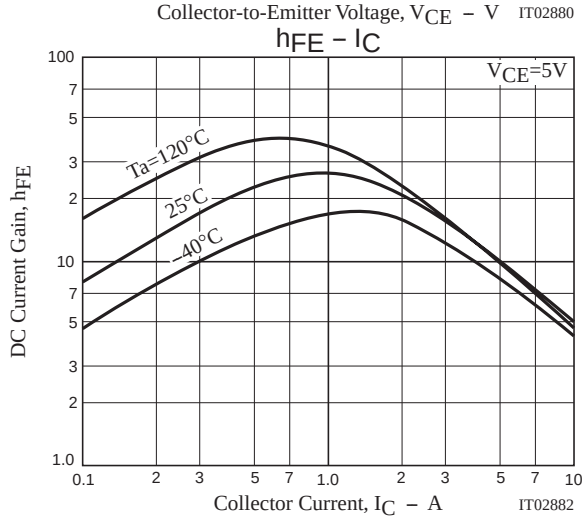
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	V_{CE}(sat)	I_C=7.2A, I_B=1.44A			3	V
Base-to-Emitter Saturation Voltage	V_{BE}(sat)	I_C=7.2A, I_B=1.44A			1.5	V
DC Current Gain	$h_{FE}1$	V_{CE}=5V, I_C=1A	15			
	$h_{FE}2$	V_{CE}=5V, I_C=8A	5		8	
Diode Forward Voltage	V_F	I_{EC}=8A			2	V
Fall Time	t_f	I_C=5A, I_{B1}=1A, I_{B2}=−2A			0.3	μs

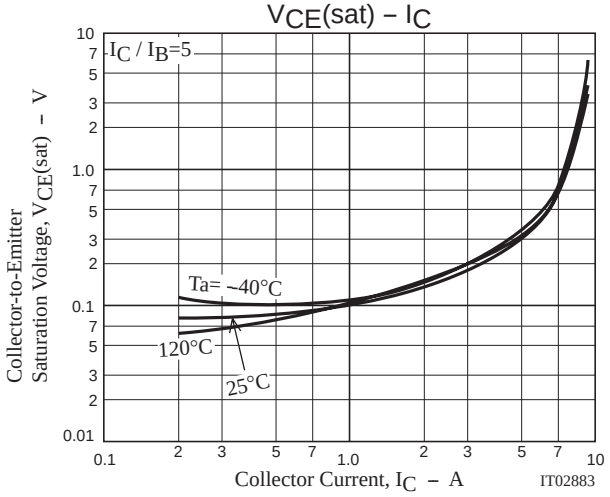
Switching Time Test Circuit

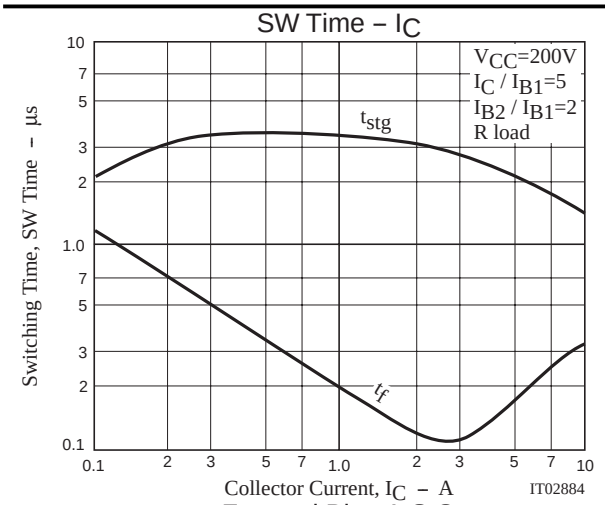


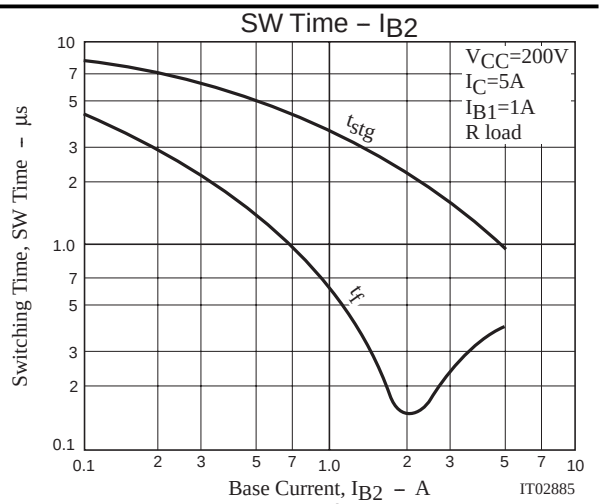


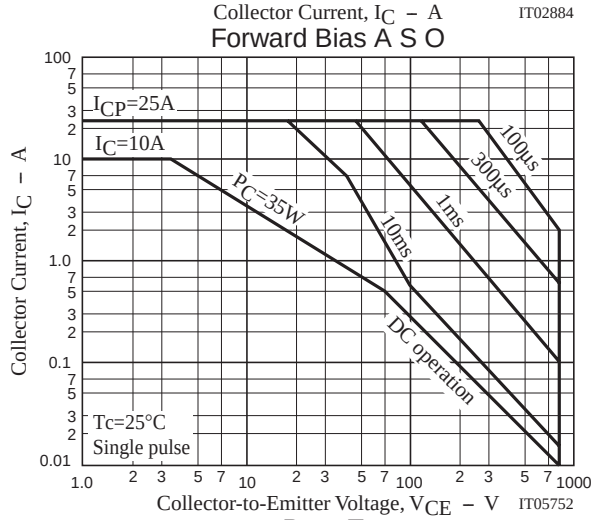


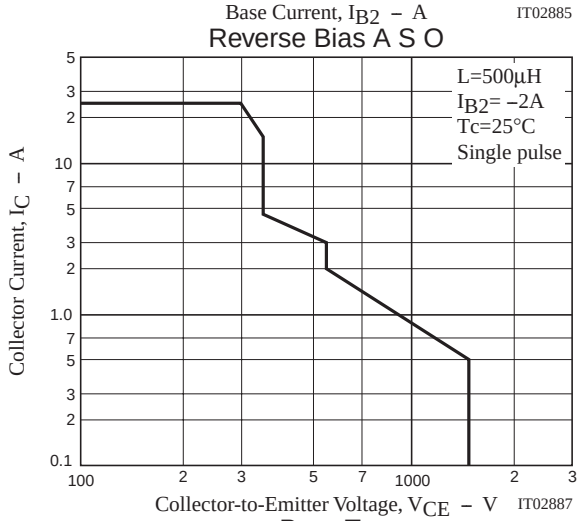


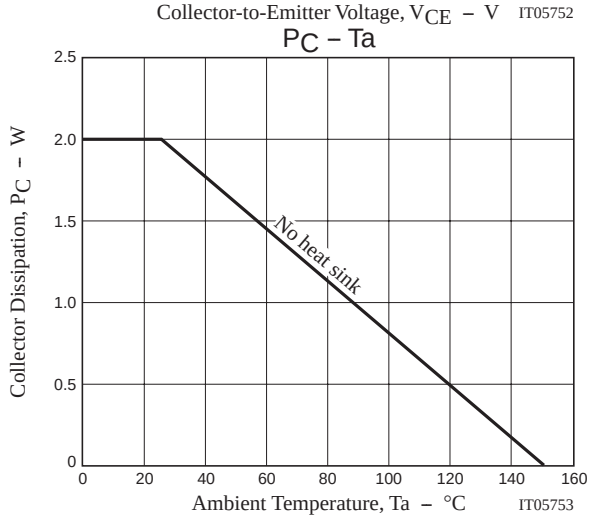


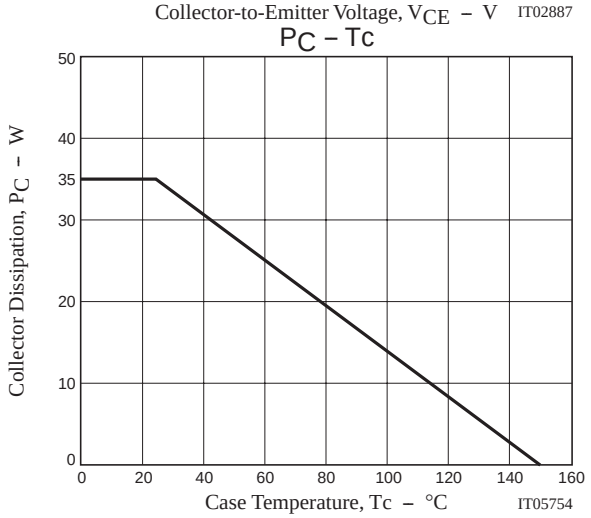

SW Time – IC
VCC=200V
IC / IB1=5
IB2 / IB1=2
R load
tstg
tf
Switching Time, SW Time – µs
Collector Current, IC – A
IT02884


SW Time – IB2
VCC=200V
IC=5A
IB1=1A
R load
tstg
tf
Switching Time, SW Time – µs
Base Current, IB2 – A
IT02885


Forward Bias A S O
ICP=25A
IC=10A
PC=35W
100µs
300µs
1ms
10ms
DC operation
Tc=25°C
Single pulse
Collector Current, IC – A
Collector-to-Emitter Voltage, VCE – V
IT05752


Reverse Bias A S O
L=500µH
IB2= –2A
Tc=25°C
Single pulse
Collector Current, IC – A
Collector-to-Emitter Voltage, VCE – V
IT02887


PC – Ta
No heat sink
Collector Dissipation, PC – W
Ambient Temperature, Ta – °C
IT05753


PC – Tc
Collector Dissipation, PC – W
Case Temperature, Tc – °C
IT05754

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