Ordering number:ENN3793

NPN Triple Diffused Planar Silicon Transistor

2SC4440

Ultrahigh-Definition Monocuro Display Horizontal Deflection Output Applications

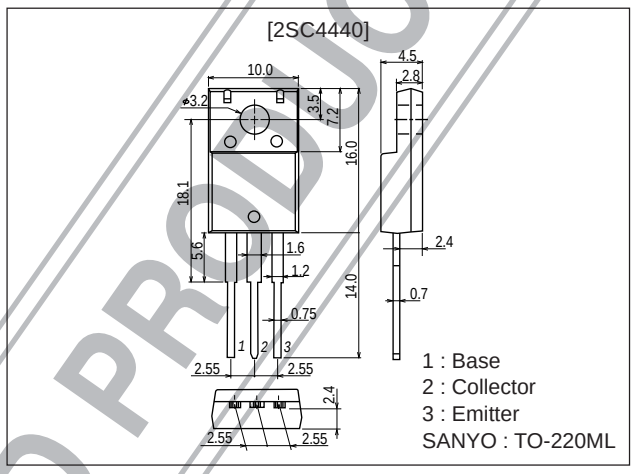
Features

- High reliability (Adoption of HVP process).
- High-speed switching.
- High breakdown voltage.
- Wide ASO.
- Adoption of MBIT process.
- Attachment workability is good by Mica-less package.

Package Dimensions

unit:mm

2041A



Specifications

Absolute Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		600	V
Collector-to-Emitter Voltage	V_{CEO}		400	V
Emitter-to-Base Voltage	V_{EBO}		7	V
Collector Current	I_C		7	A
Collector Current (Pulse)	I_{CP}	PW≤300μs, Duty Cycle≤10%	14	A
Collector Dissipation	P_C		2.0	W
		Tc=25˚C	30	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}=400V, I_E=0			10	μA
	I_{CES}	V_{CE}=600V			0.5	mA
Collector-to-Emitter Sustain Voltage	$V_{CEO(sus)}$	I_C=100mA, I_B=0	400			V
Emitter Cutoff Current	I_{EBO}	V_{EB}=5V, I_C=0			1	mA
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=4A, I_B=0.8A			0.8	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=4A, I_B=0.8A			1.5	V

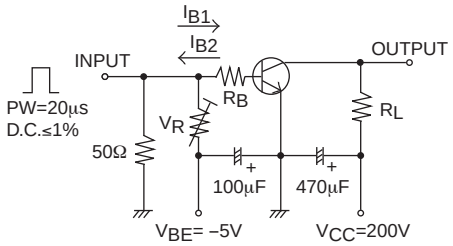
Continued on next page.

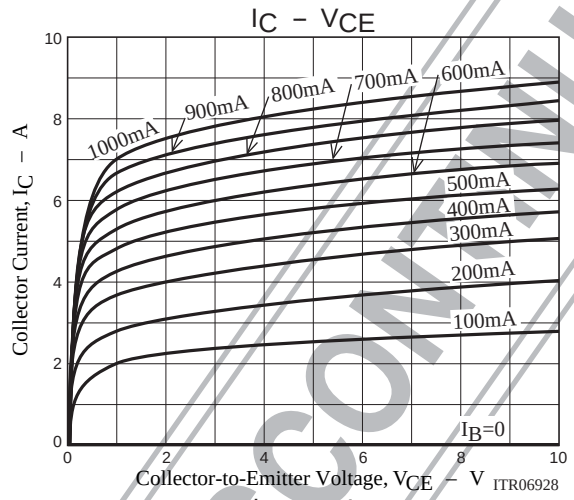
SANYO Electric Co.,Ltd. Semiconductor Company
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

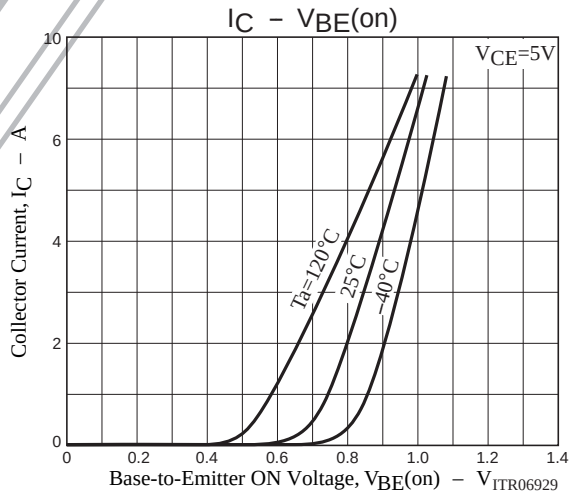
Continued from preceding page.

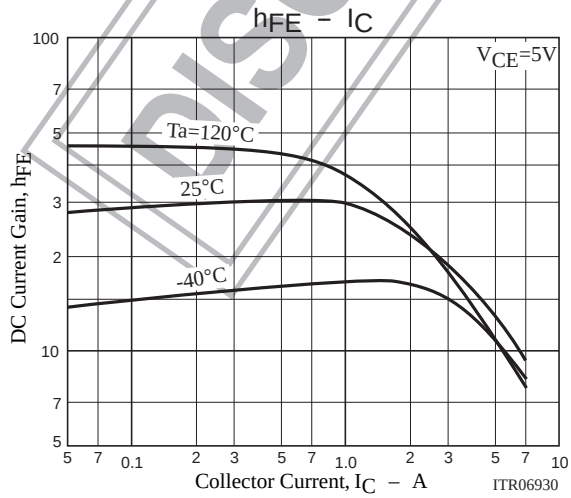
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
DC Current Gain	$h_{FE}1$	V_{CE}=5V, I_C=0.8A	15			
	$h_{FE}2$	V_{CE}=5V, I_C=4A	10		20	
Gain-Bandwidth Product	f_T	V_{CE}=10V, I_C=0.8A		20		MHz
Storage Time	t_{stg}	I_C=5A, I_B1=1A, I_B2=–2A, R_L=40Ω, V_{CC}=200V			3.0	μs
Fall Time	t_f	I_C=5A, I_B1=1A, I_B2=–2A, R_L=40Ω, V_{CC}=200V			0.2	μs

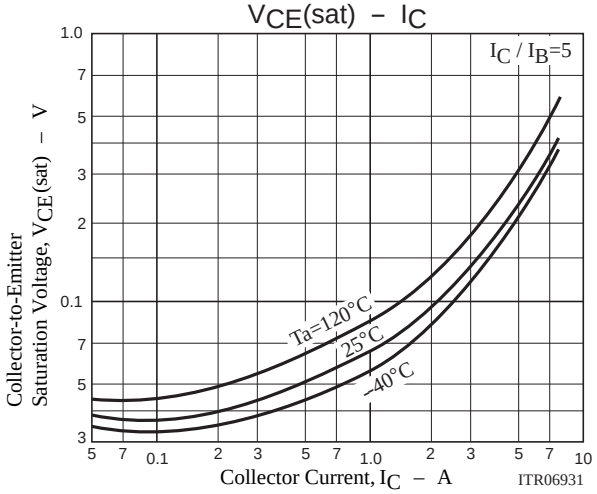
Switching Time Test Circuit



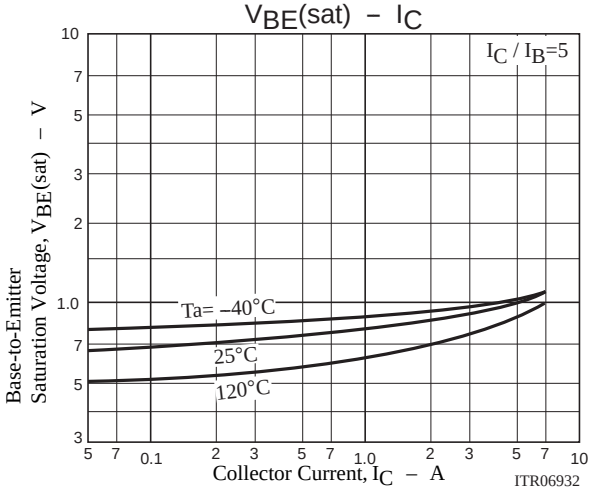




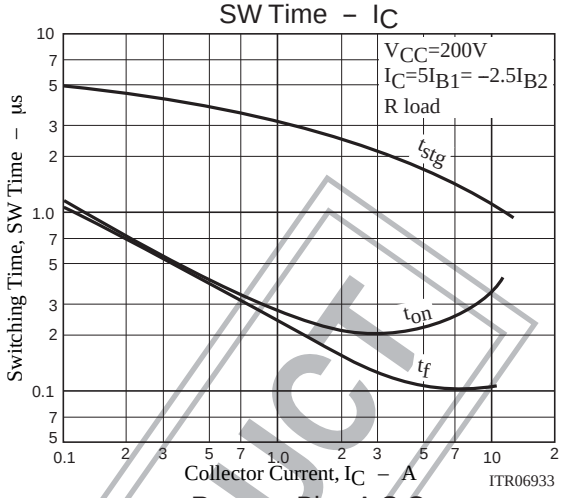




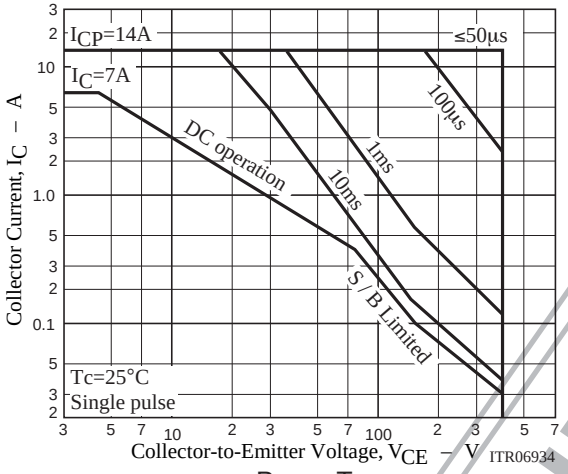
$V_{BE}(sat)$ – I_C



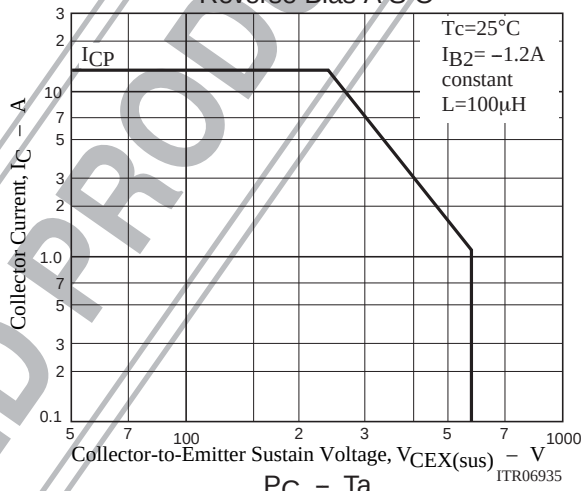
SW Time – I_C



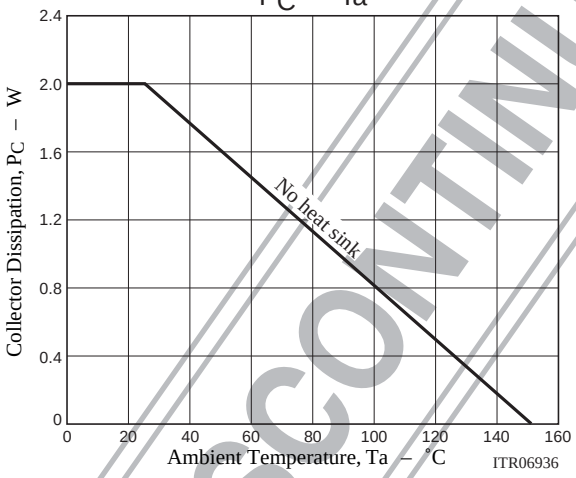
Forward Bias A S O



Reverse Bias A S O



P_C – Ta



P_C – Ta