



No.5416A

2SC5300

NPN Triple Diffused Planar Silicon Transistor

Ultrahigh-Definition Color Display
Horizontal Deflection Output Applications

Features

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

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

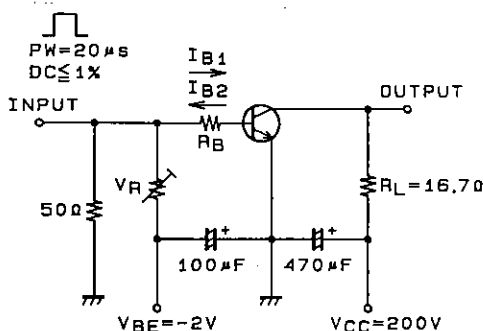
			unit
Collector-to-Base Voltage	V_{CBO}	1500	V
Collector-to-Emitter Voltage	V_{CEO}	800	V
Emitter-to-Base Voltage	V_{EBO}	6	V
Collector Current	I_C	20	A
Collector Current (Pulse)	I_{CP}	40	A
Collector Dissipation	P_C	3	W
		75	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

$T_c=25^\circ\text{C}$

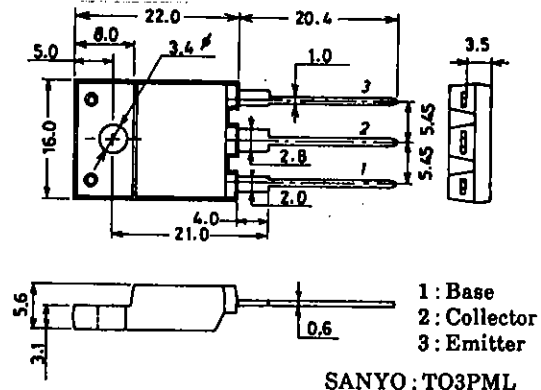
Electrical Characteristics at $T_a=25^\circ\text{C}$

			min	typ	max	unit
Collector Cutoff Current	I_{CES}	$V_{CE}=1500\text{V}, R_{BE}=0$			1.0	mA
Collector Sustain Voltage	$V_{CEO(sus)}$	$I_C=100\text{mA}, I_B=0$	800			V
Emitter Cutoff Current	I_{EBO}	$V_{EB}=4\text{V}, I_C=0$			1.0	mA
Collector Cutoff Current	I_{CBO}	$V_{CB}=800\text{V}, I_E=0$			10	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=5\text{V}, I_C=1.0\text{A}$	20		30	
	$h_{FE(2)}$	$V_{CE}=5\text{V}, I_C=16\text{A}$	4		7	
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=16\text{A}, I_B=4\text{A}$			5	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=16\text{A}, I_B=4\text{A}$			1.5	V
Storage Time	t_{stg}	$I_C=12\text{A}, I_{B1}=2.4\text{A}, I_{B2}=-4.8\text{A}$			3.0	μs
Fall Time	t_f	$I_C=12\text{A}, I_{B1}=2.4\text{A}, I_{B2}=-4.8\text{A}$	0.1	0.2		μs

Switching Time Test Circuit



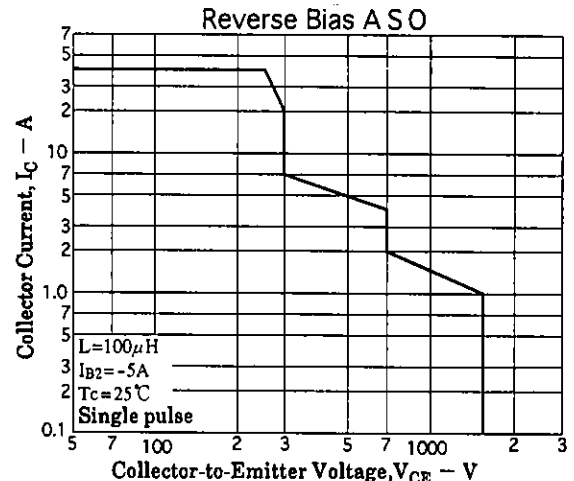
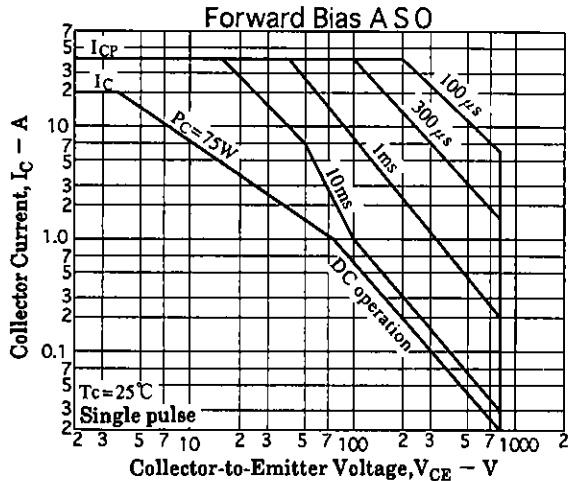
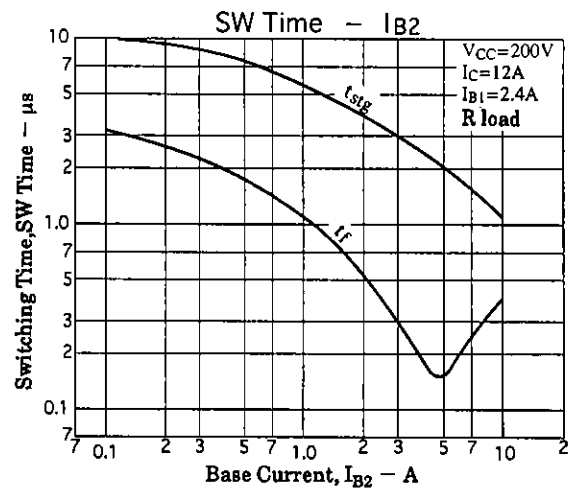
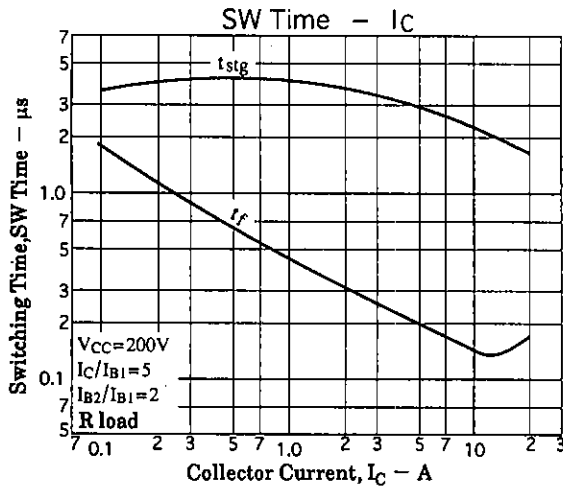
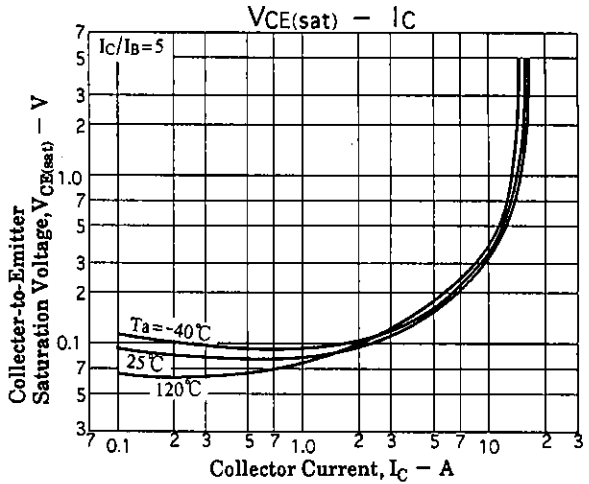
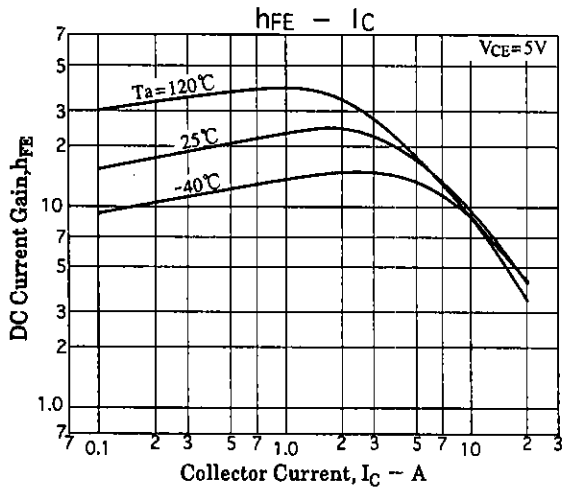
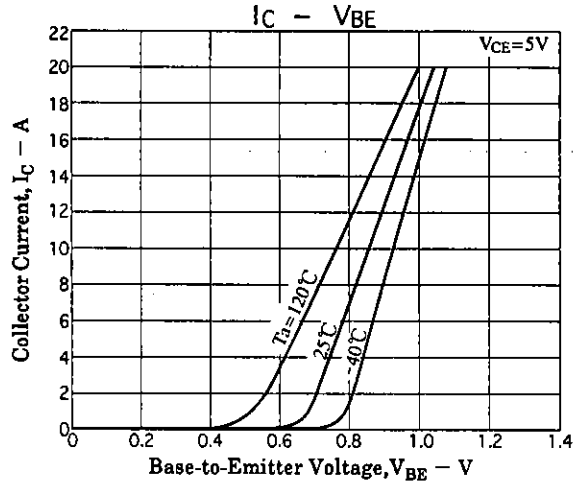
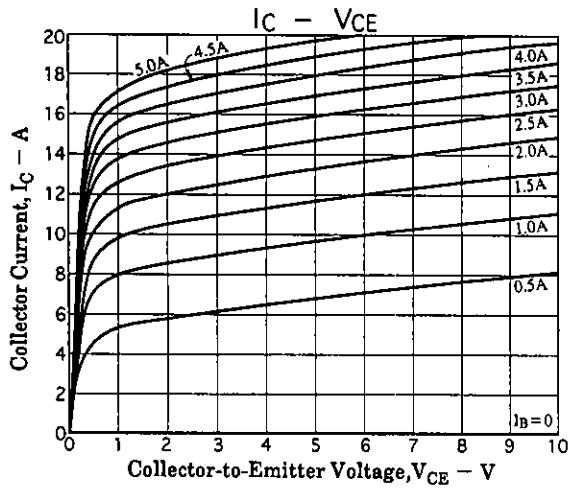
**Package Dimensions 2039C
(unit: mm)**

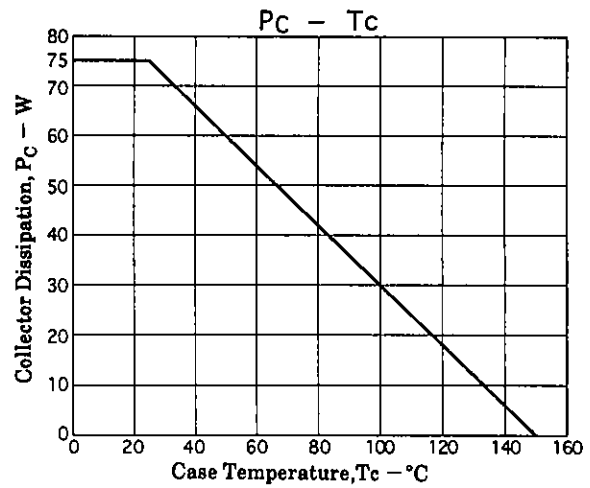
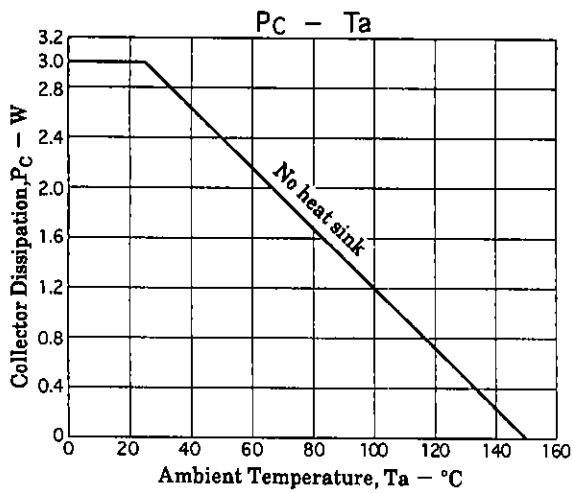


1: Base
2: Collector
3: Emitter

SANYO: TO3PML

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