

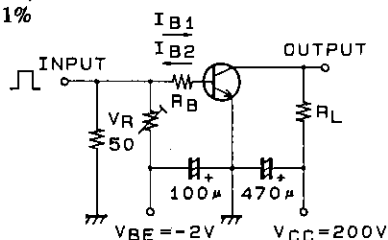
No.4138

NPN Triple Diffused Planar Silicon Transistor
Very High-Definition CRT Display
Horizontal Deflection Output Applications

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

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	15	A
Peak Collector Current	i_{cp}	35	A
Collector Dissipation	P_C	3.0	W
	$T_c = 25^\circ\text{C}$	75	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

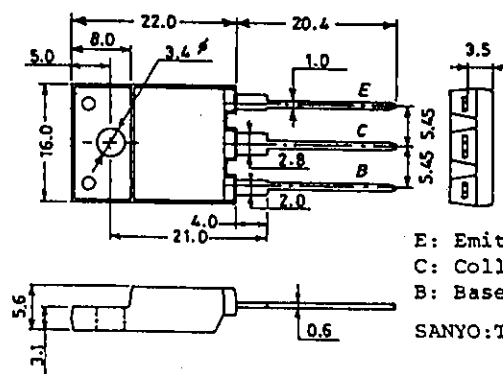
Electrical Characteristics at $T_A = 25^\circ\text{C}$			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = 800\text{V}, I_E = 0$			10	μA
Collector Cutoff Current	I_{CES}	$V_{CE} = 1500\text{V}, R_{BE} = 0$			1.0	mA
Collector Sustain Voltage	$V_{CEO(sus)}$	$I_C = 100\text{mA}, I_B = 0$	800			V
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 4\text{V}, I_C = 0$			1.0	mA
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = 12\text{A}, I_B = 3.0\text{A}$			5	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = 12\text{A}, I_B = 3.0\text{A}$			1.5	V
DC Current Gain	$h_{FE(1)}$	$V_{CE} = 5\text{V}, I_C = 1.0\text{A}$	8		30	
	$h_{FE(2)}$	$V_{CE} = 5\text{V}, I_C = 12\text{A}$	4		8	
Storage Time	t_{stg}	$I_C = 8\text{A}, I_{B1} = 1.6\text{A}, I_{B2} = -3.2\text{A}$			3.0	μs
Fall Time	t_f	$I_C = 8\text{A}, I_{B1} = 1.6\text{A}, I_{B2} = -3.2\text{A}$			0.2	μs

$$\begin{aligned}PW &= 20\mu s \\ DC &\leq 1\%\end{aligned}$$


400653

Unit (resistance: Ω , capacitance:F)

(unit: mm)



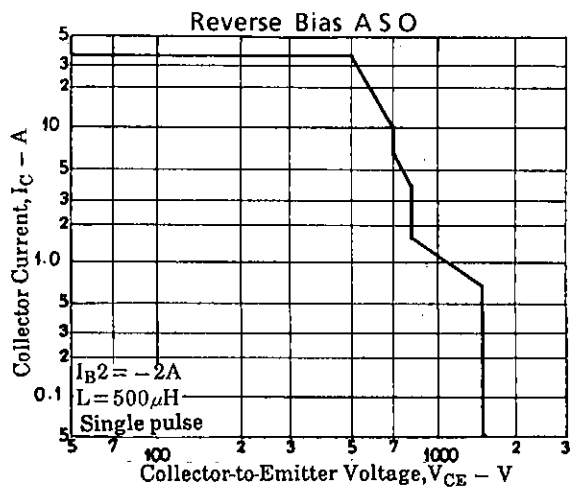
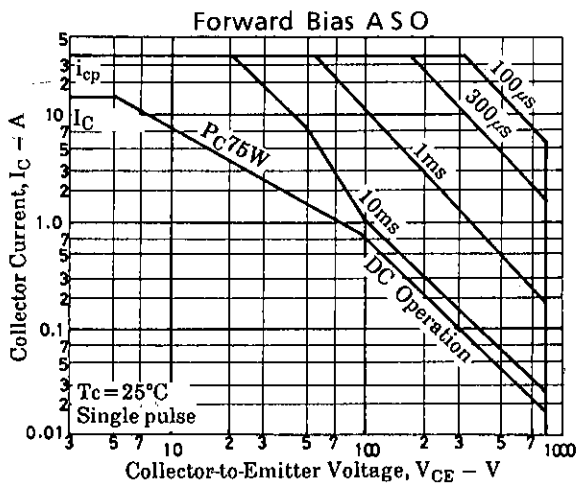
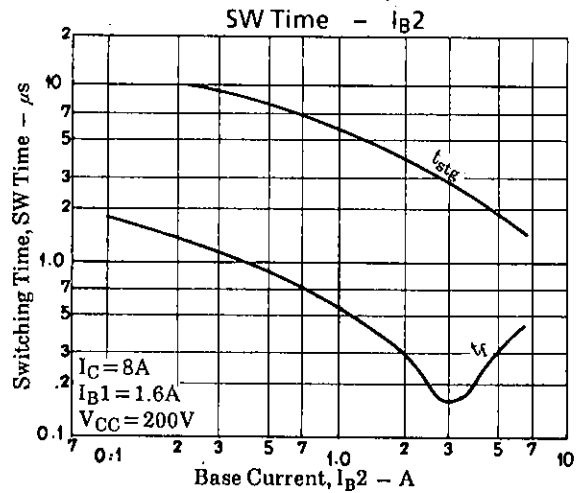
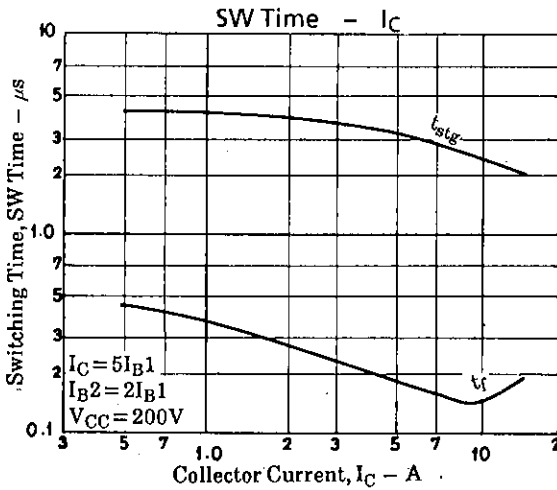
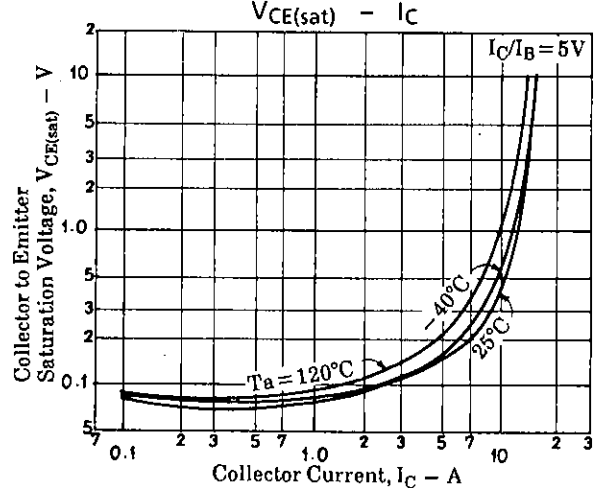
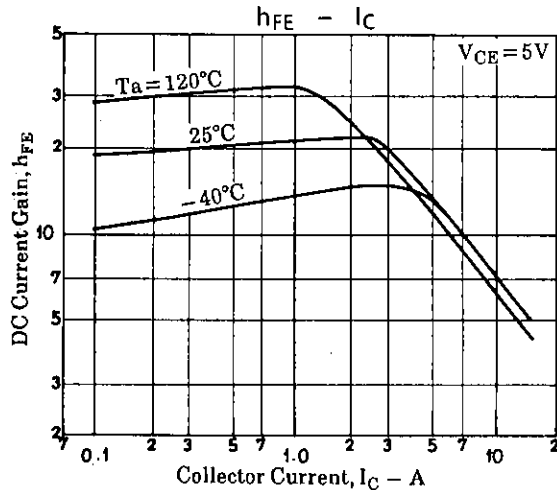
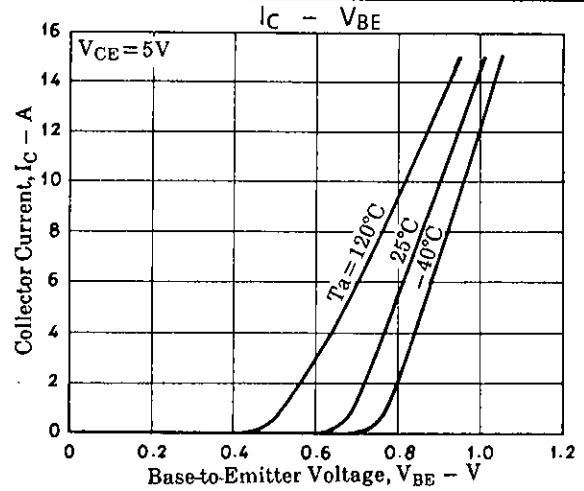
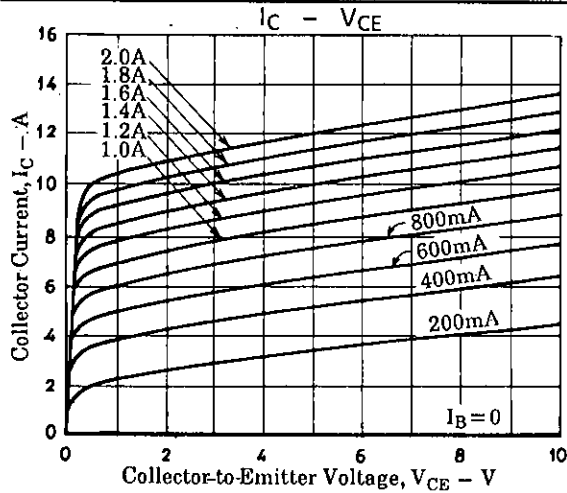
E: Emitter
C: Collector
B: Base

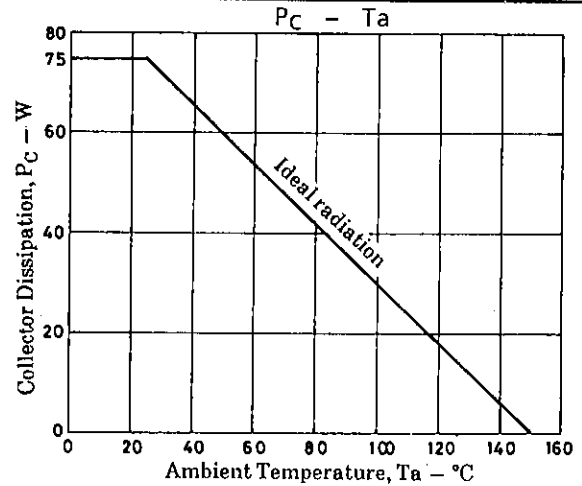
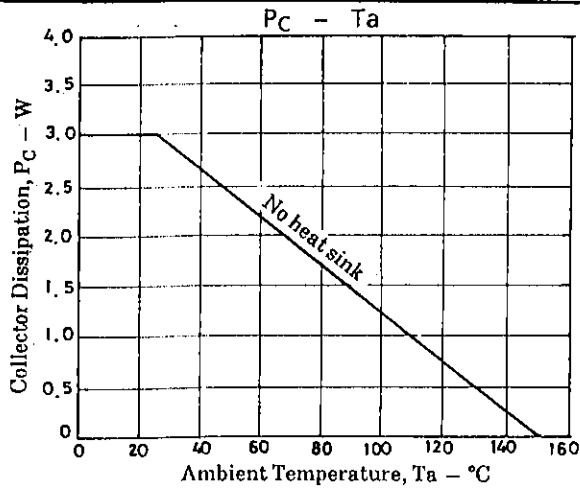
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5132MH (KOTO) No.4138-1/3





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