

<b>SANYO</b>	No.2977	<h1 style="margin: 0;">2SC4478</h1> <p style="margin: 0;">NPN Epitaxial Planar Silicon Transistor</p> <p style="margin: 0;">High-Definition CRT Display Horizontal Deflection Output Applications</p>
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**Features**

- Fast switching speed
- Low saturation voltage
- Adoption of MBIT process
- Micaless package facilitating easy mounting

**Absolute Maximum Ratings at Ta = 25°C**

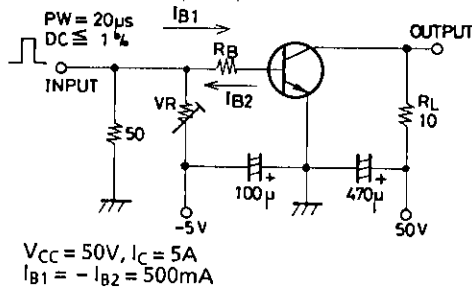
			unit
Collector-to-Base Voltage	V <sub>CB0</sub>	400	V
Collector-to-Emitter Voltage	V <sub>CEO</sub>	200	V
Emitter-to-Base Voltage	V <sub>EBO</sub>	6	V
Collector Current	I <sub>C</sub>	7	A
Peak Collector Current	i <sub>cp</sub>	12	A
Base Current	I <sub>B</sub>	4	A
Collector Dissipation	P <sub>C</sub>	2	W
		30	W
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55 to +150	°C

T<sub>C</sub> = 25°C

**Electrical Characteristics at Ta = 25°C**

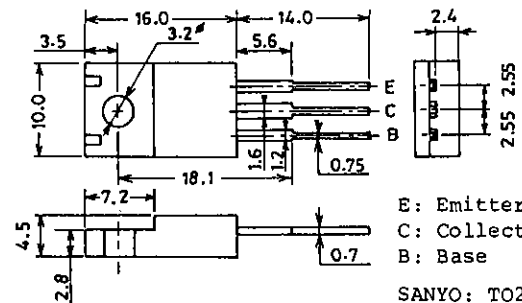
		min	typ	max	unit
Collector Cutoff Current	I <sub>CB0</sub> V <sub>CB</sub> = 250V, I <sub>E</sub> = 0			100	μA
Emitter Cutoff Current	I <sub>EBO</sub> V <sub>EB</sub> = 5V, I <sub>C</sub> = 0			100	μA
DC Current Gain	h <sub>FE</sub> (1) V <sub>CE</sub> = 1V, I <sub>C</sub> = 1A	15			
	h <sub>FE</sub> (2) V <sub>CE</sub> = 1V, I <sub>C</sub> = 5A	10		50	
Gain-Bandwidth Product	f <sub>T</sub> V <sub>CE</sub> = 10V, I <sub>C</sub> = 0.5A	10	40		MHz
C-E Saturation Voltage	V <sub>CE(sat)</sub> I <sub>C</sub> = 5A, I <sub>B</sub> = 0.5A			0.8	V
B-E Saturation Voltage	V <sub>BE(sat)</sub> I <sub>C</sub> = 5A, I <sub>B</sub> = 0.5A			1.5	V
C-B Breakdown Voltage	V <sub>(BR)CBO</sub> I <sub>C</sub> = 1mA, I <sub>E</sub> = 0	400			V
C-E Breakdown Voltage	V <sub>(BR)CEO</sub> I <sub>C</sub> = 1mA, R <sub>BE</sub> = ∞	200			V
E-B Breakdown Voltage	V <sub>(BR)EBO</sub> I <sub>E</sub> = 1mA, I <sub>C</sub> = 0	6			V
Fall Time	t <sub>f</sub> (See specified Test Circuit.)			0.3	μs
	I <sub>C</sub> = 5A,				
	I <sub>B1</sub> = -I <sub>B2</sub> = 0.5A				

**Switching Time Test Circuit**



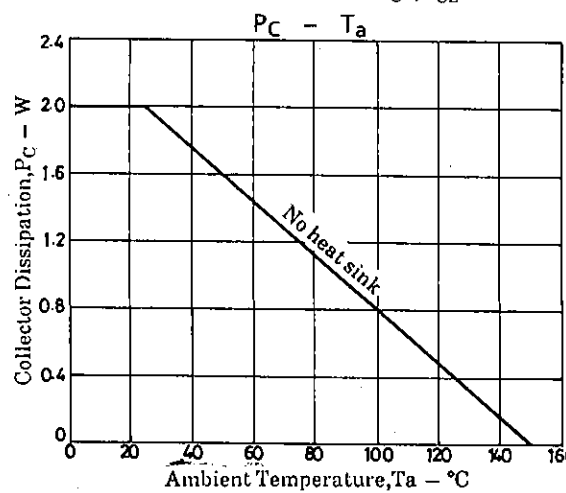
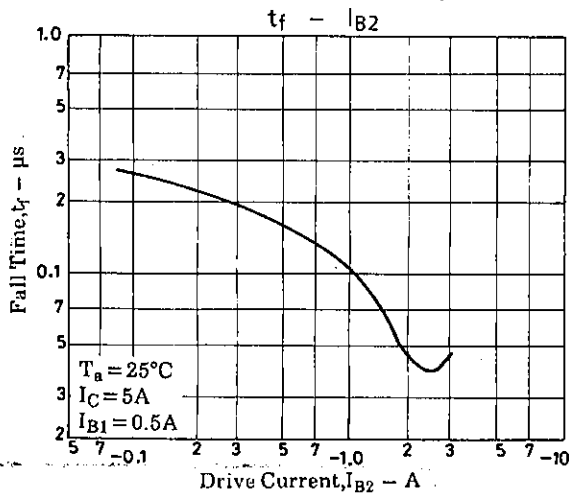
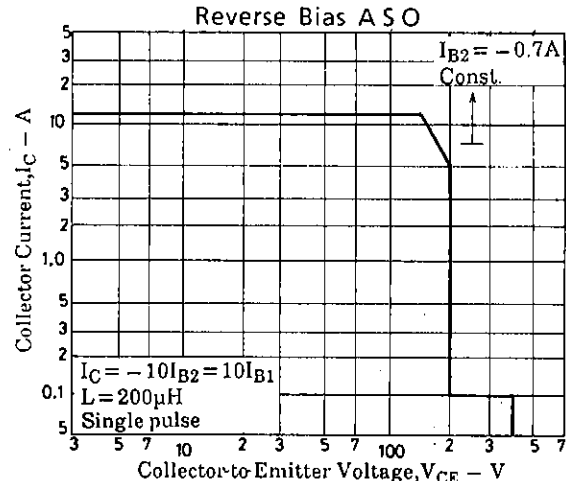
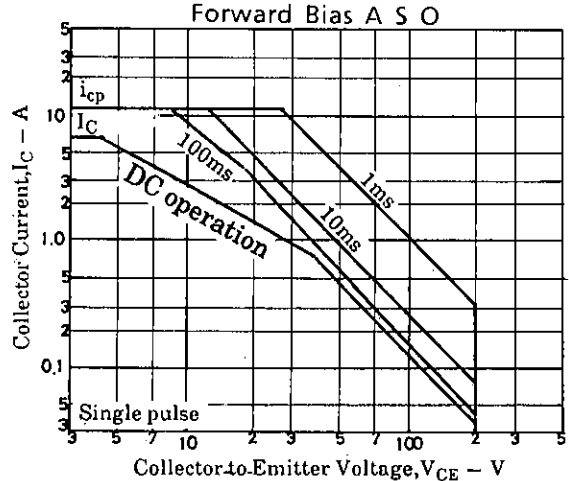
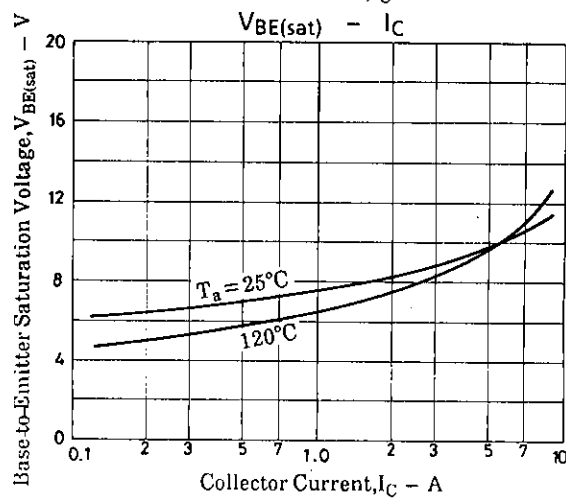
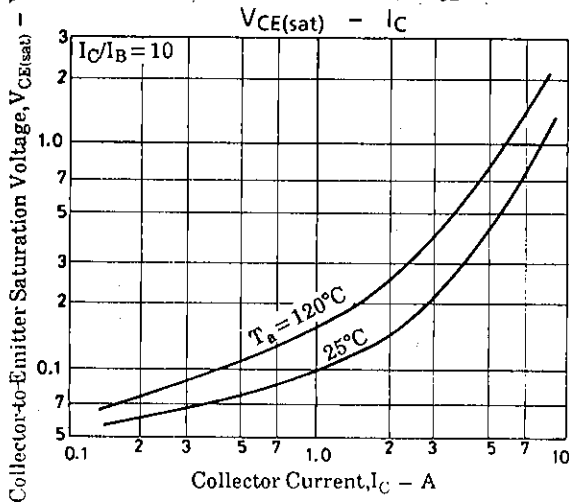
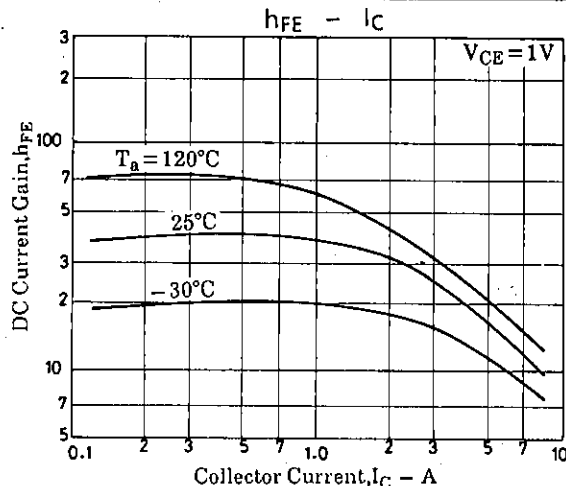
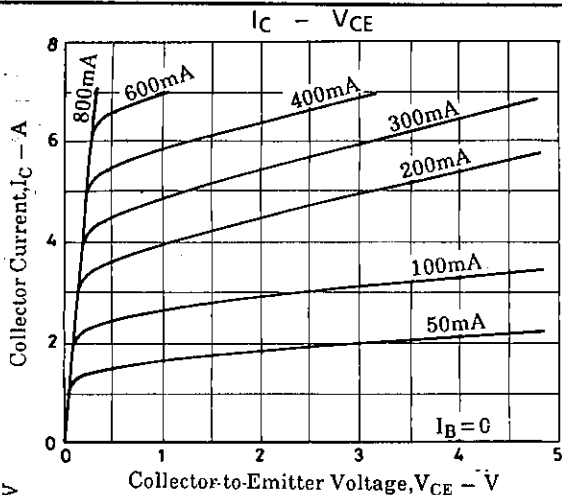
**Package Dimensions 2041**

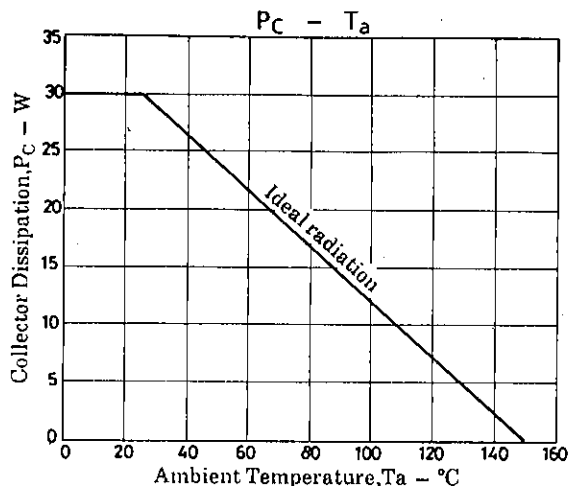
(unit : mm)



E: Emitter  
C: Collector  
B: Base

SANYO: TO220ML





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