

**2SD1958**

## TV Horizontal Deflection Output High-Current Switching Applications

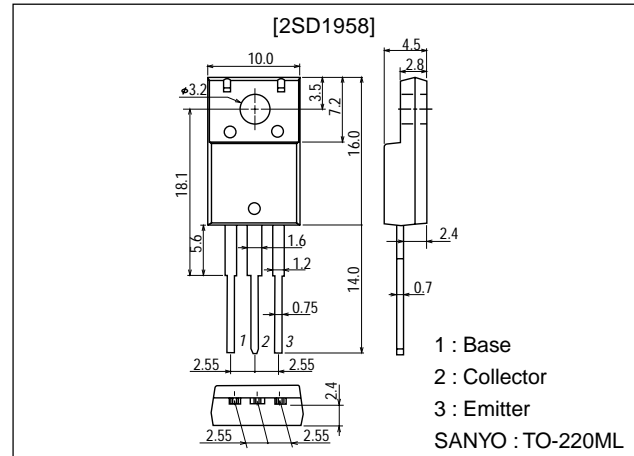
### Features

- Excellent  $t_f$  permitting efficient drive with less internal dissipation.

### Package Dimensions

unit:mm

2041A



### Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	$V_{CB0}$		200	V
Collector-to-Emitter Voltage	$V_{CE0}$		60	V
Emitter-to-Base Voltage	$V_{EB0}$		6	V
Collector Current	$I_C$		4.5	A
Collector Current (Pulse)	$I_{CP}$		10	A
Collector Dissipation	$P_C$	$T_c=25^\circ\text{C}$	30	W
Junction Temperature	$T_j$		150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-55 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CB0}$	$V_{CB}=40\text{V}, I_E=0$			0.1	mA
Emitter Cutoff Current	$I_{EB0}$	$V_{EB}=5\text{V}, I_C=0$			0.1	mA
DC Current Gain	$h_{FE1}$	$V_{CE}=5\text{V}, I_C=1\text{A}$	30		160	
	$h_{FE2}$	$V_{CE}=5\text{V}, I_C=4\text{A}$	25			
Gain-Bandwidth Product	$f_T$	$V_{CE}=5\text{V}, I_C=1\text{A}$		10		MHz
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=4\text{A}, I_B=0.4\text{A}$		0.5	1.0	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=4\text{A}, I_B=0.4\text{A}$			1.5	V

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**SANYO Electric Co., Ltd. Semiconductor Business Headquarters**

TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

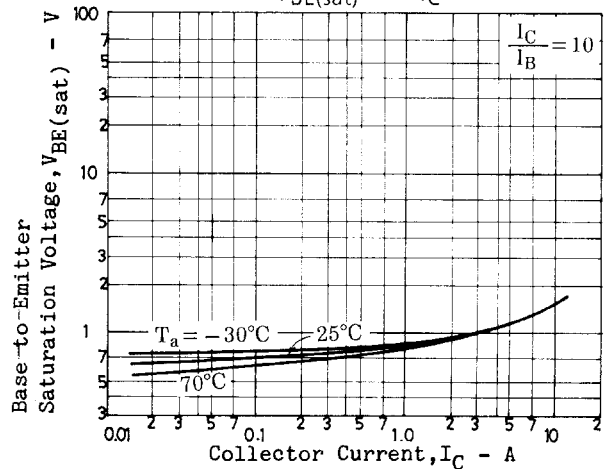
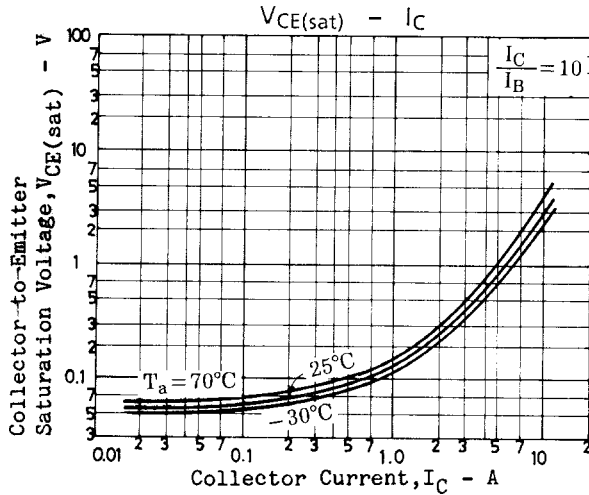
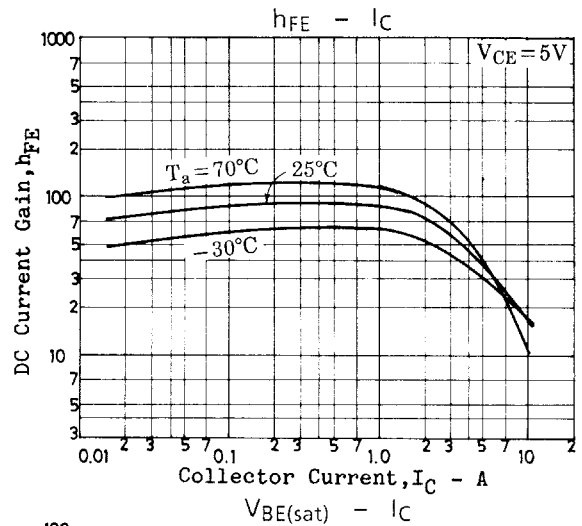
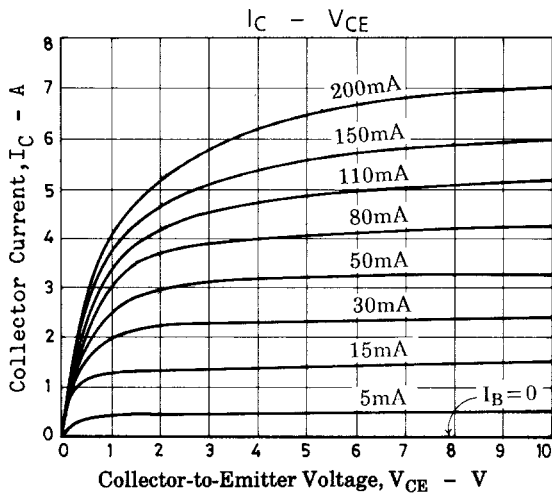
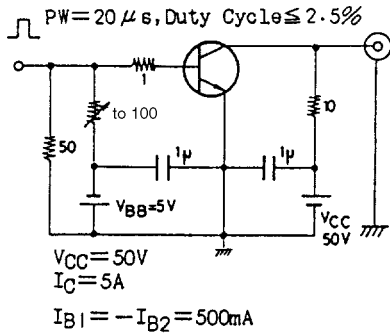
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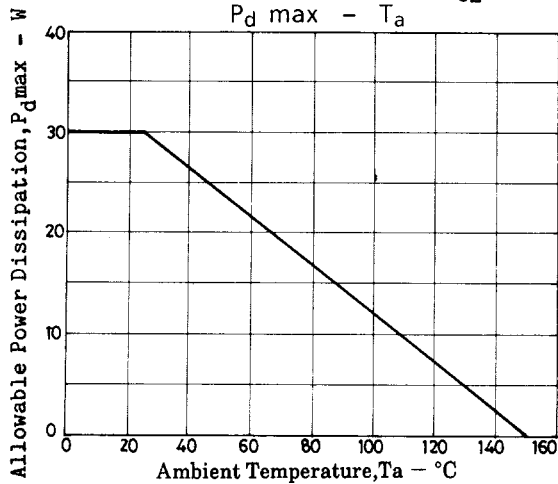
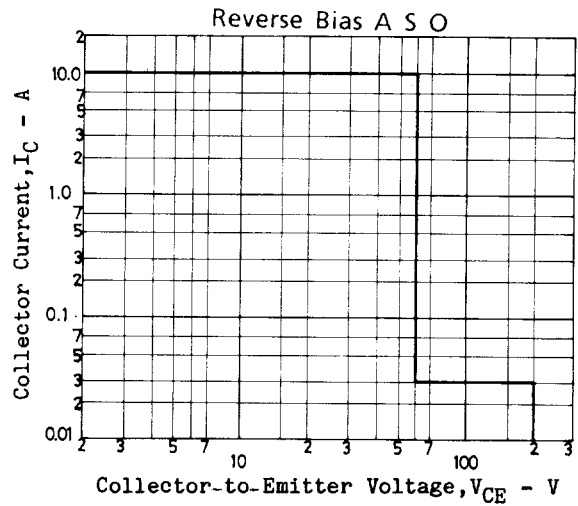
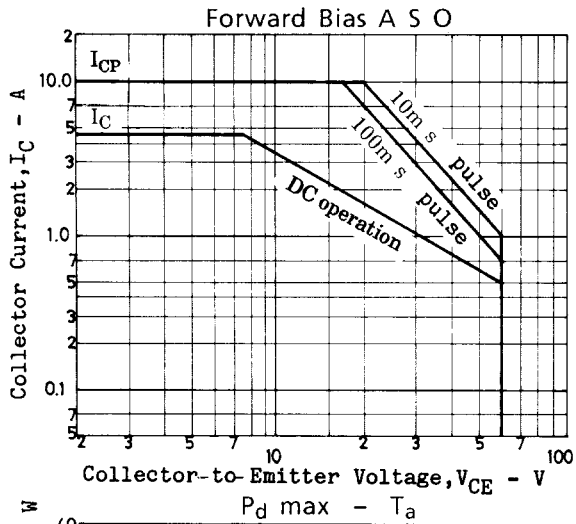
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=5mA, I_E=0$	200			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=5mA, R_{BE}=\infty$	60			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=5mA, I_C=0$	6			V
Fall Time	$t_f$	See specified Test Circuit.		0.2	0.5	$\mu s$

## Switching Time Test Circuit



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