

**2SC3176**

CRT Horizontal Deflection Output Applications (with Damper Diode)

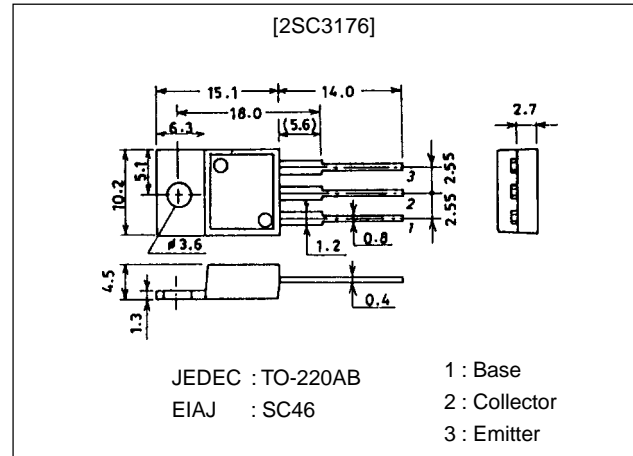
Features

- Fast switching speed.
- Especially suited for use in high-definition CRT display ($V_{CC}=12$ to $24V$).
- Wide ASO.

Package Dimensions

unit:mm

2010C



Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		400	V
Collector-to-Emitter Voltage	V_{CEO}		200	V
Emitter-to-Base Voltage	V_{EBO}		6	V
Collector Current	I_C		7	A
Collector Current (Pulse)	I_{CP}		12	A
Base Current	I_B		4	A
Collector Dissipation	P_C	$T_c=25^\circ C$	50	W
Junction Temperature	T_j		150	$^\circ C$
Storage Temperature	T_{stg}		-55 to +150	$^\circ C$

Electrical Characteristics at $T_a = 25^\circ C$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=200V, I_E=0$			100	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=6V, I_C=0$			400	mA
DC Current Gain	h_{FE1}	$V_{CE}=1V, I_C=1A$	15			
	h_{FE2}	$V_{CE}=1V, I_C=5A$	8		40	
Gain-Bandwidth Product	f_T	$V_{CE}=10V, I_C=0.5A$	10	40		MHz
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=5A, I_B=0.65A$			1	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=5A, I_B=0.65A$			1.3	V

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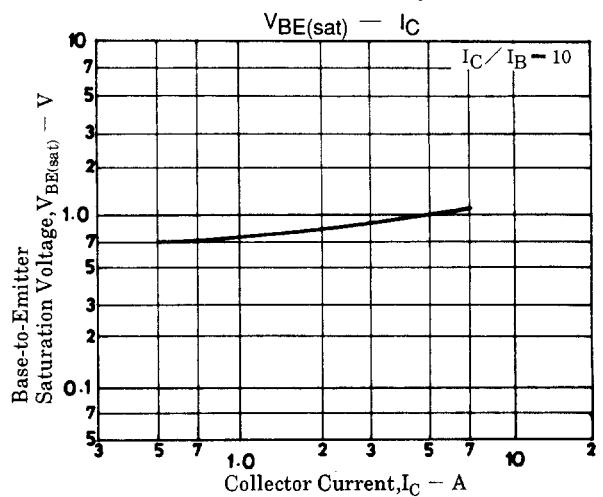
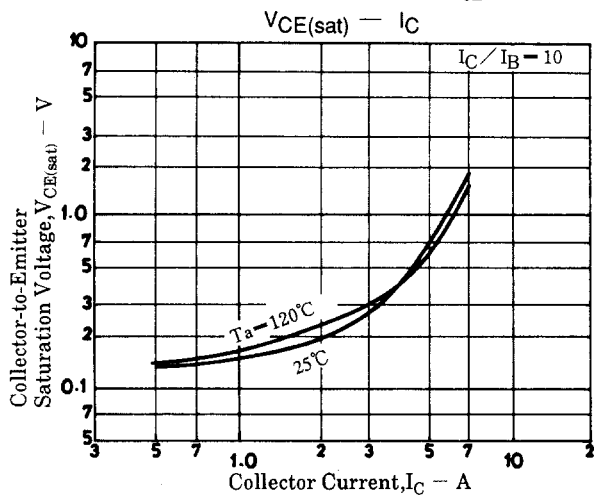
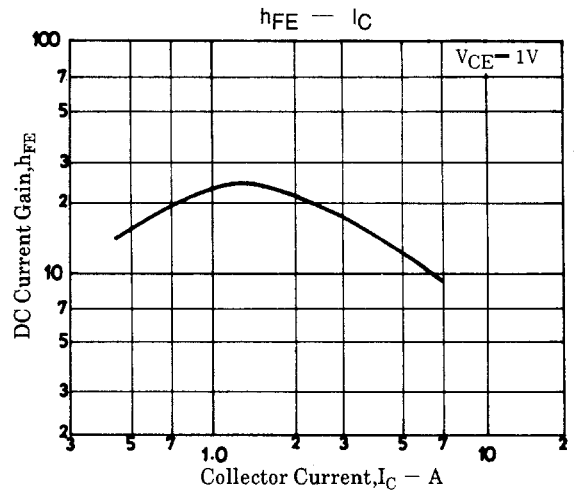
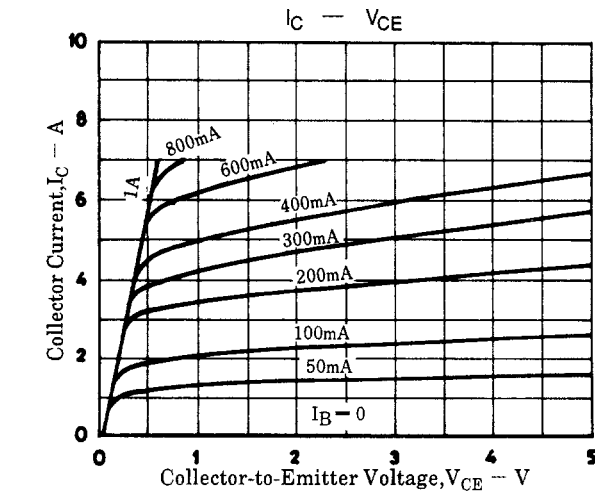
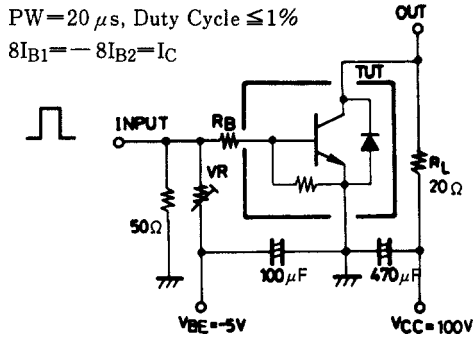
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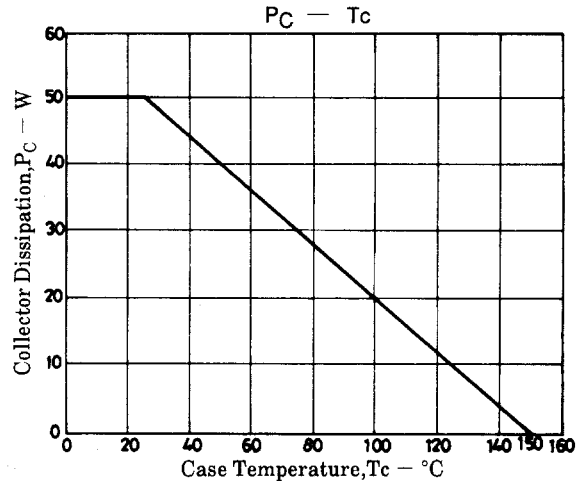
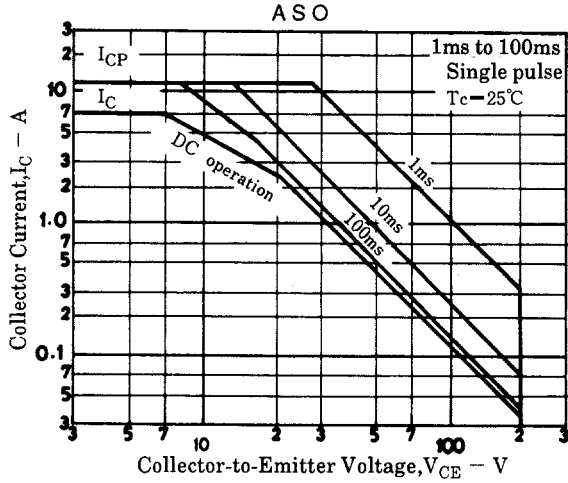
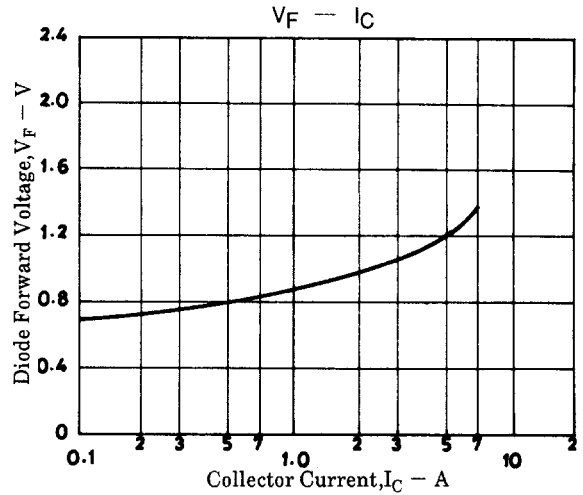
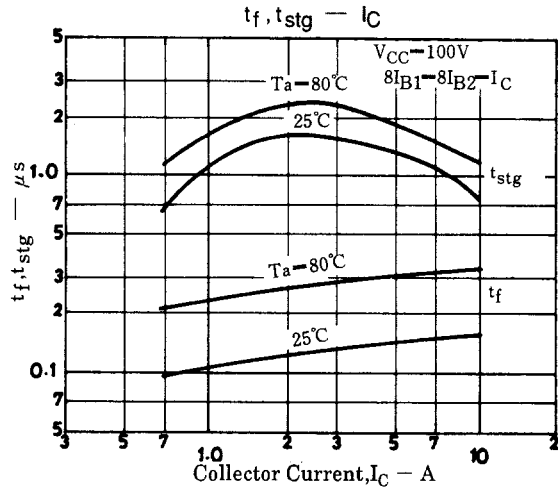
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=1mA, I_E=0$	400			V
Diode Forward Voltage	V_F	$I_F=5A$			1.5	V
Fall Time	t_f	$I_C=5A, I_{B1}=-I_{B2}=0.625A$			0.5	μs

Switching Time Test Circuit





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