

**2SD1398**



2022

NPN Triple Diffused Planar Silicon Transistor

T-33-13

**Color TV Horizontal Deflection Output Applications (with Damper Diode)**

©1224C

**Features**

- High breakdown voltage and high reliability.
- High switching speed.
- Capable of being mounted in a variety of methods because of plastic molded package of one-point fixing type.

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

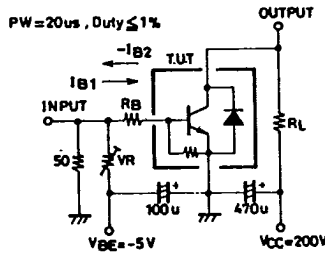
			unit
Collector to Base Voltage	$V_{CB0}$	1500	V
Collector to Emitter Voltage	$V_{CE0}$	800	V
Emitter to Base Voltage	$V_{EB0}$	7	V
Collector Current	$I_C$	5	A
Peak Collector Current	$i_{cp}$	16	A
Collector Dissipation	$P_C$	120	W
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

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

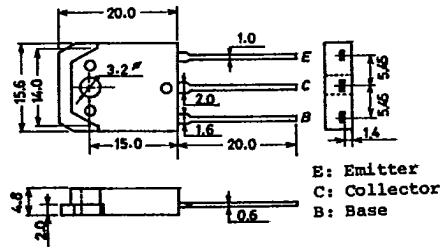
**Electrical Characteristics at  $T_a=25^\circ\text{C}$**

			min	typ	max	unit
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=800\text{V}, I_E=0$			10	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=4\text{V}, I_C=0$	40		130	mA
DC Current Gain	$h_{FE}$	$V_{CE}=5\text{V}, I_C=1\text{A}$	8			
Gain Bandwidth Product	$f_T$	$V_{CE}=10\text{V}, I_C=1\text{A}$		3		mHz
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=4\text{A}, I_B=0.8\text{A}$			5	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=4\text{A}, I_B=0.8\text{A}$			1.5	V
Collector to Base Breakdown Voltage	$V_{(BR) CBO}$	$I_C=5\text{mA}, I_E=0$	1500			V
Collector to Emitter Breakdown Voltage	$V_{(BR) CEO}$	$I_C=100\text{mA}, R_{BE}=\infty$	800			V
Emitter to Base Breakdown Voltage	$V_{(BR) EBO}$	$I_E=200\text{mA}, I_C=0$	7			V
Diode Forward Voltage	$V_F$	$I_{EC}=5\text{A}$			2	V
Fall Time	$t_f$	$I_C=4\text{A}, I_{B1}=0.8\text{A}, I_{B2}=-1.6\text{A}, V_{CC}=200\text{V}, R_L=50\text{ohm}$			0.4	us

**Switching Time Test Circuit**



**Case Outline 2022 (unit:mm)**

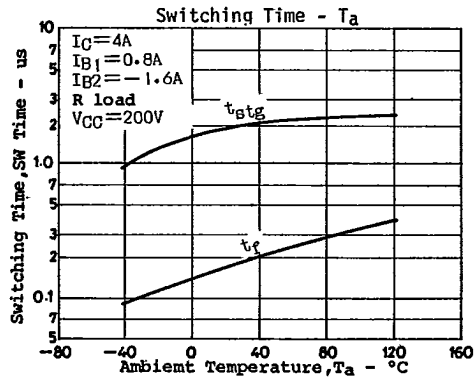
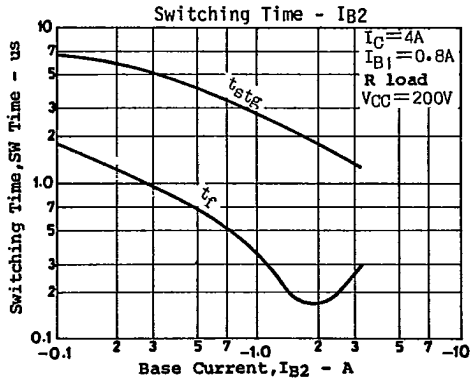
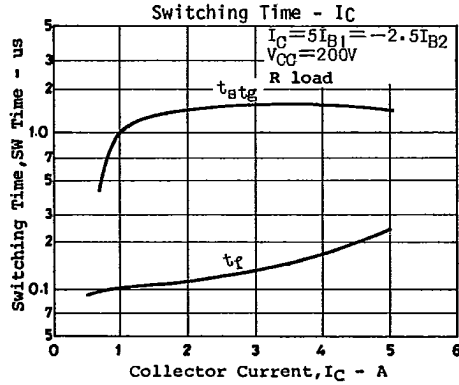
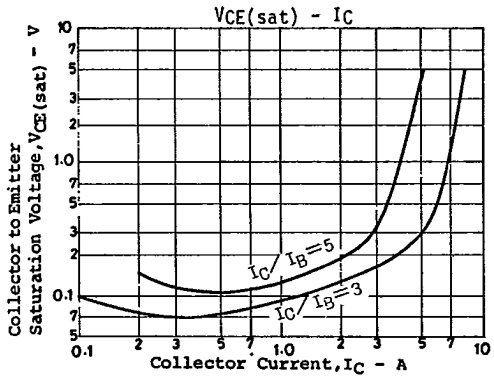
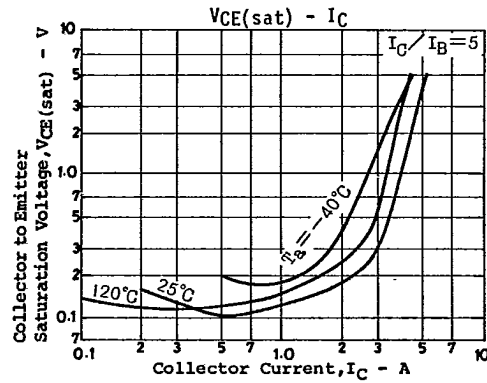
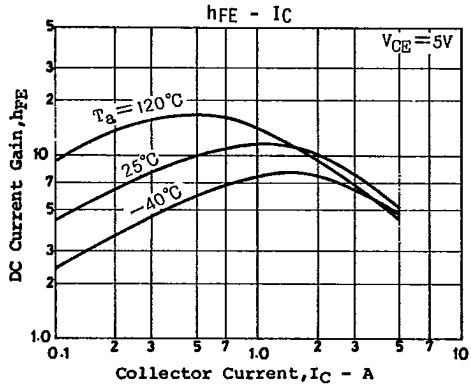
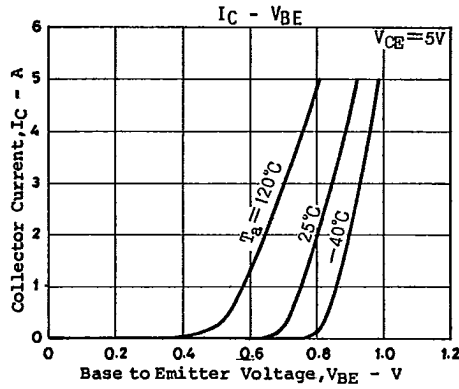
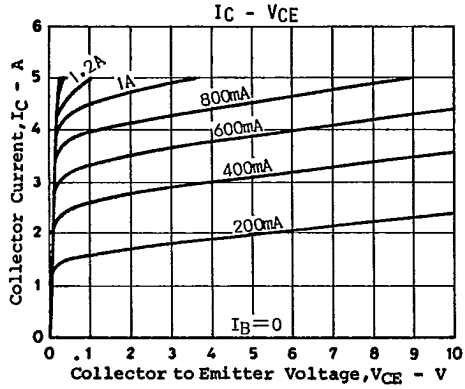


5257KI/5263KI/3083KI, TS No.1224-1/3

**1415**

2SD1398

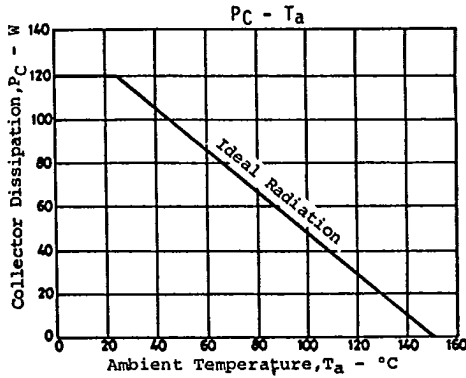
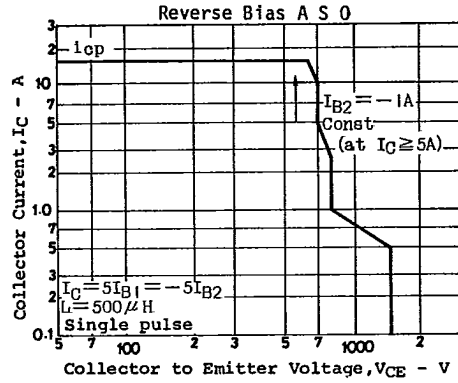
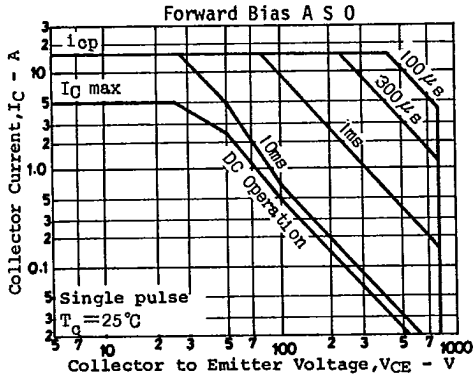
T-33-13



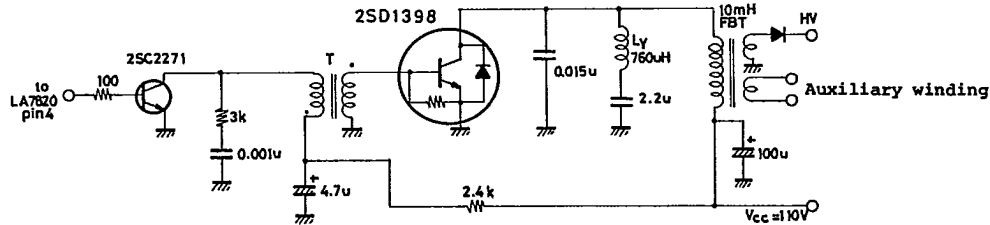
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2SD1398

T-33-13



Sample Application Circuit



T : C5163 (Tokyo Parts Kogyo-made)  
 NP = 1025T  
 NS = 48 3/4 T  
 Core DR8 × 11

$I_{B1} = 0.8A$   
 $-I_{B2} = 0.9 \sim 1.6A$   
 $I_C = 4A$