

2SD1770, 2SD1770A

Silicon PNP Triple-Diffused Planar Type

Power Amplifier

TV Vertical Deflection Output

Complementary Pair with 2SB1190, 2SB1190A

■ Features

- High collector-emitter voltage (V_{CE0})
- Large collector power dissipation (P_C)

■ Absolute Maximum Ratings ($T_c=25^\circ\text{C}$)

Item	Symbol	Value	Unit
Collector-base voltage	2SD1770	200	V
	2SD1770A	200	V
Collector-emitter voltage	2SD1770	150	V
	2SD1770A	180	V
Emitter-base voltage	V_{EB0}	6	V
Peak collector current	I_{CP}	2	A
Collector current	I_C	1	A
Collector power dissipation	$T_c=25^\circ\text{C}$	25	W
	$T_a=25^\circ\text{C}$	1.4	
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	$-55 \sim +150$	$^\circ\text{C}$

■ Electrical Characteristics ($T_c=25^\circ\text{C}$)

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	I_{CB0}	$V_{CB}=200\text{ V}, I_F=0$			50	μA
Emitter cutoff current	I_{EB0}	$V_{EB}=4\text{ V}, I_C=0$			50	μA
Collector-emitter voltage	2SD1770	$I_C=5\text{ mA}, I_B=0$	150			V
		$I_C=5\text{ mA}, I_B=0$	180			V
Emitter-base voltage	V_{EB0}	$I_E=0.5\text{ mA}, I_C=0$	6			V
DC current gain	h_{FE1}^*	$V_{CE}=10\text{ V}, I_C=100\text{ mA}$	60		240	
	h_{FE2}	$V_{CE}=10\text{ V}, I_C=300\text{ mA}$	50			
Base-emitter voltage	V_{BE}	$V_{CE}=10\text{ V}, I_C=300\text{ mA}$			1	V
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500\text{ mA}, I_B=50\text{ mA}$			1	V
Transition frequency	f_T	$V_{CE}=10\text{ V}, I_C=100\text{ mA}, f=1\text{ MHz}$		20		MHz
Collector output capacitance	C_{ob}	$V_{CB}=10\text{ V}, I_F=0, f=1\text{ MHz}$		27		pF

* h_{FE1} Classifications

Class	Q	P
h_{FE1}	60~140	100~240

■ Package Dimensions



