

2SA748

Silicon PNP Epitaxial Planar Type

Medium Power Amplifier

Complementary Pair with 2SC1398

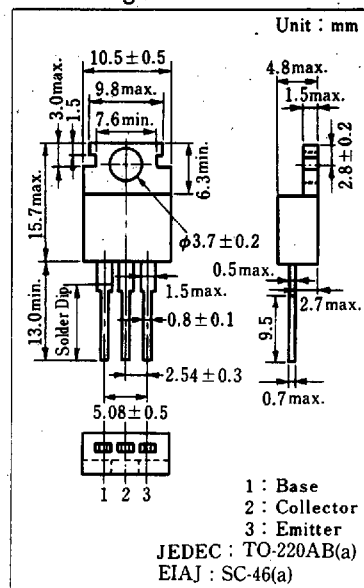
■ Features

- Large collector power dissipation (P_C)
- 10W output in complementary pair with 2SC1398

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

Item	Symbol	Value	Unit
Collector-base voltage	V_{CB0}	-70	V
Collector-emitter voltage	V_{CE0}	-50	V
Emitter-base voltage	V_{EB0}	-5	V
Peak collector current	I_{CP}	-3	A
Collector current	I_C	-2	A
Collector power dissipation ($T_c=25^\circ\text{C}$)	P_C	15	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 ~ +150	$^\circ\text{C}$

■ Package Dimensions

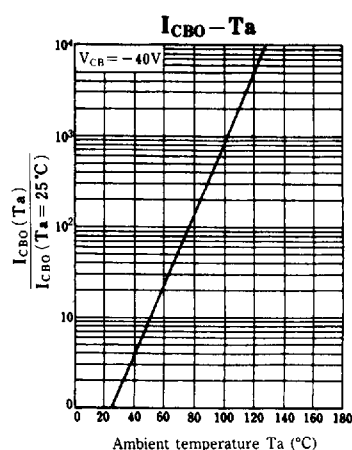
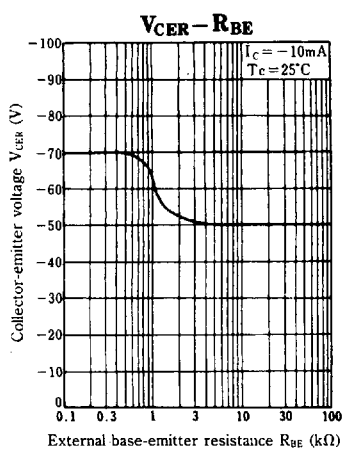
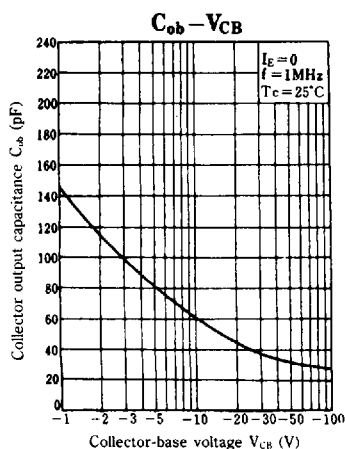
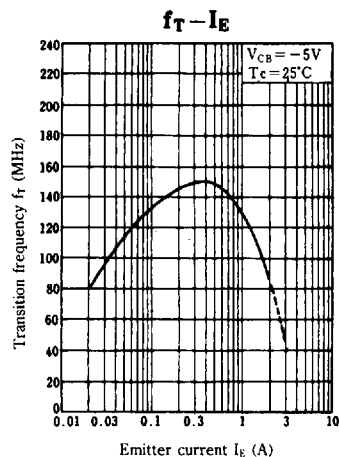
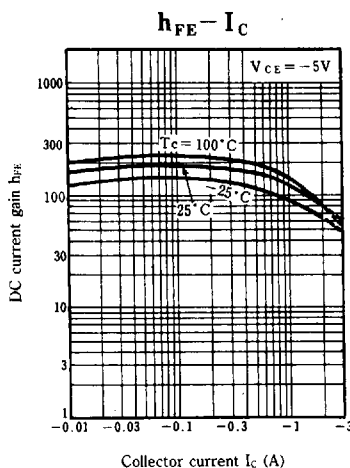
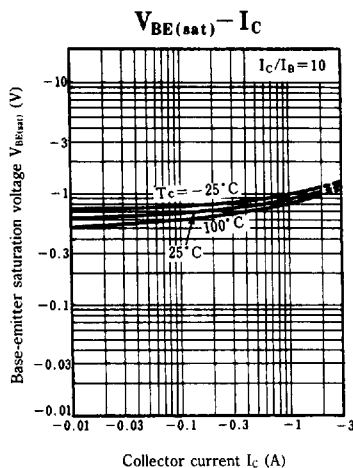
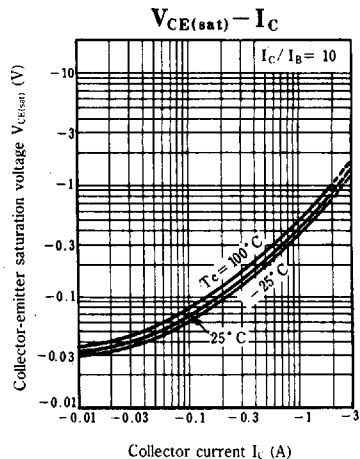
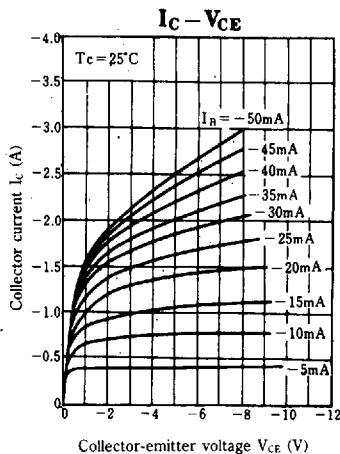
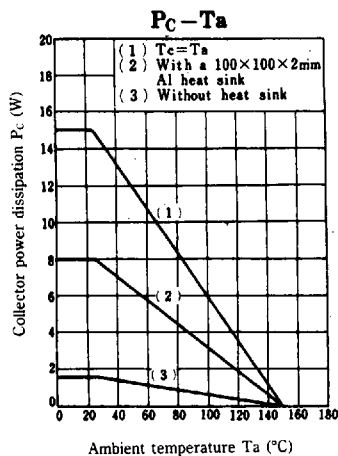


■ Electrical Characteristics ($T_c=25^\circ\text{C}$)

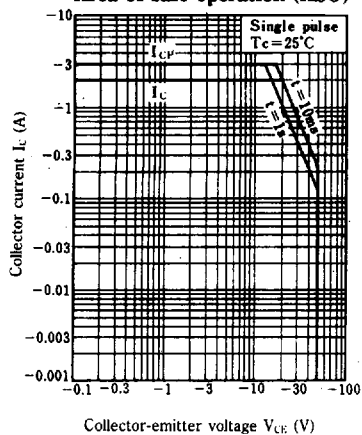
Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	I_{CB0}	$V_{CB} = -40\text{V}, I_E = 0$			-1	μA
	I_{CE0}	$V_{CE} = -20\text{V}, I_B = 0$			-100	
Collector-base voltage	V_{CB0}	$I_C = -1\text{mA}, I_E = 0$	-70			V
Collector-emitter voltage	V_{CE0}	$I_C = -10\text{mA}, I_B = 0$	-50			V
Emitter cutoff current	I_{EB0}	$V_{EB} = -5\text{V}, I_C = 0$			-100	μA
DC current gain	h_{FE1}	$V_{CE} = -5\text{V}, I_C = -100\text{mA}$	30			
	h_{FE2}^*	$V_{CE} = -5\text{V}, I_C = -1\text{A}$	30	130	220	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -2\text{A}, I_B = -0.2\text{A}$		-0.6	-1.0	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -2\text{A}, I_B = -0.2\text{A}$		-1.0	-1.5	V
Transition frequency	f_T	$V_{CB} = -5\text{V}, I_E = 0.5\text{A}, f = 10\text{MHz}$		120		MHz

* h_{FE2} Classifications

Class	P	Q	R
h_{FE2}	50 ~ 100	80 ~ 160	120 ~ 220



Area of safe operation (ASO)

 $R_{th}(t) - t$ 