

2SA699, 2SA699A

Silicon PNP Epitaxial Planar Type

Power Amplifier

Complementary Pair with 2SC1226, 2SC1226A

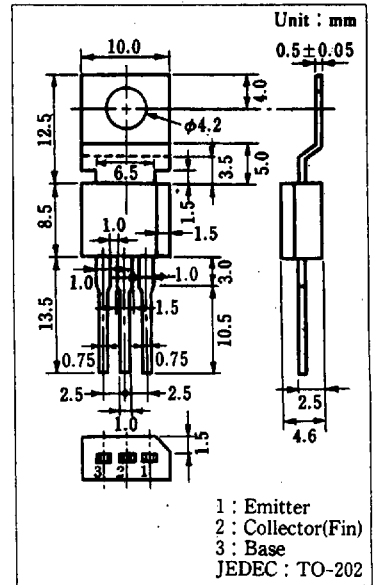
■ Feature

- 5W output in complementary pair with 2SC1226, 2SC1226A

■ Absolute Maximum Ratings (Ta=25°C)

Item	Symbol	Value	Unit
Collector-base voltage	2SA699	V_{CB0}	V
	2SA699A	-40	
Collector-emitter voltage	2SA699	V_{CEO}	V
	2SA699A	-32	
Emitter-base voltage	V_{EBO}	-5	V
Peak collector current	I_{CP}	-3	A
Base current	I_B	-0.6	A
Collector power dissipation (Tc=25°C)	P_C	10	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 ~ +150	°C

■ Package Dimensions

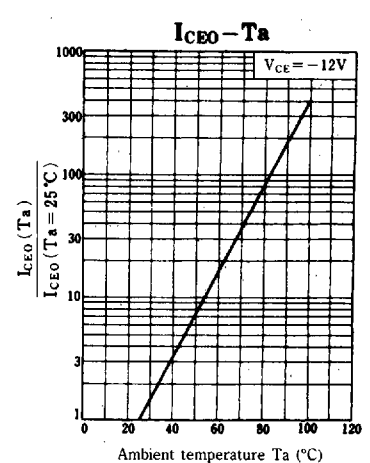
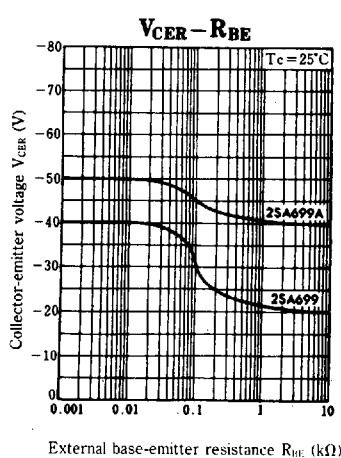
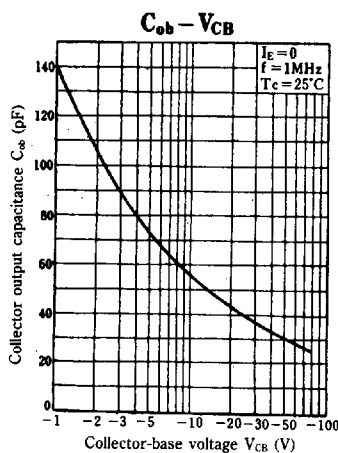
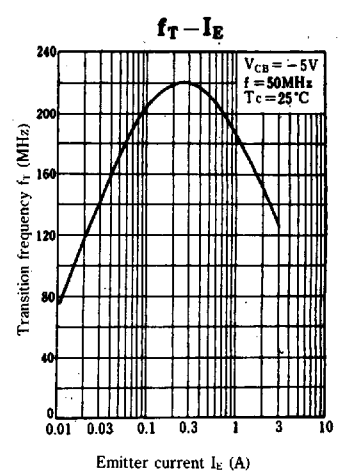
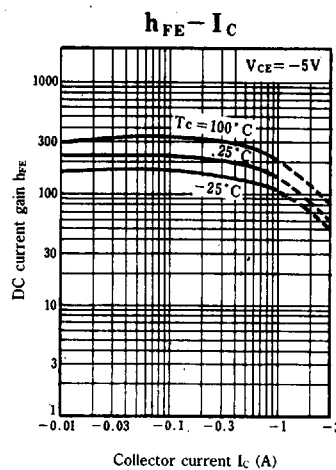
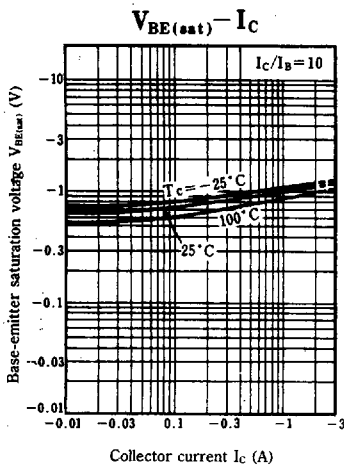
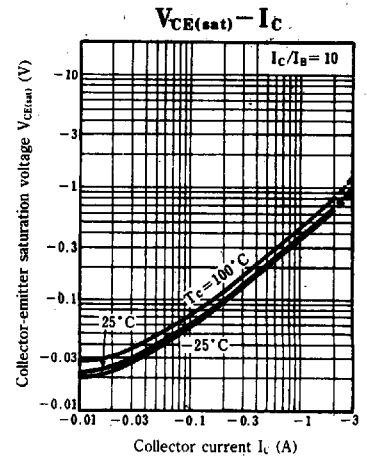
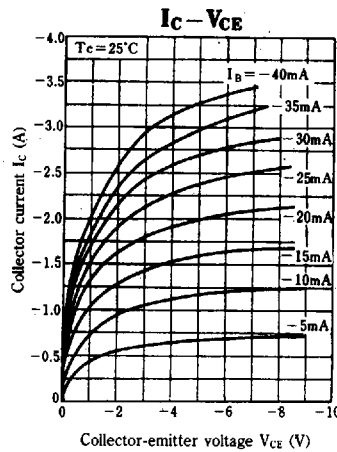
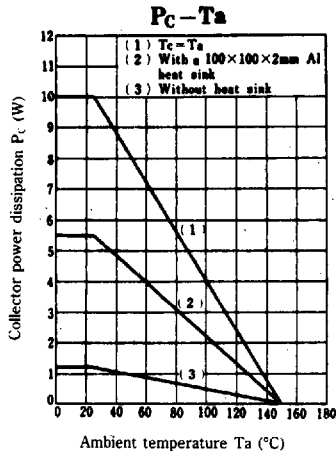


■ Electrical Characteristics (Tc=25°C)

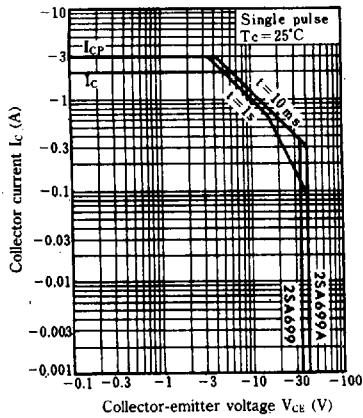
Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = -20\text{ V}, I_E = 0$			-1	μA
	I_{CEO}	$V_{CE} = -12\text{ V}, I_B = 0$			-100	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = -5\text{ V}, I_C = 0$			-100	μA
Collector-base voltage	2SA699	$I_C = -1\text{ mA}, I_E = 0$	-40			V
	2SA699A		-50			V
Collector-emitter voltage	2SA699	$I_C = -10\text{ mA}, I_B = 0$	-32			V
	2SA699A		-40			V
DC current gain	h_{FE}^*	$V_{CE} = -5\text{ V}, I_C = -1\text{ A}$	50		220	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -1.5\text{ A}, I_B = -0.15\text{ A}$		-0.4	-1	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -2\text{ A}, I_B = -0.2\text{ A}$			-1.5	V
Transition frequency	f_T	$V_{CB} = -5\text{ V}, I_E = 0.5\text{ A}, f = 200\text{ MHz}$		150		MHz
Collector output capacitance	C_{ob}	$V_{CB} = -5\text{ V}, I_E = 0, f = 1\text{ MHz}$		70		pF

* h_{FE} Classifications

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



Area of safe operation (ASO)



$R_{th}(t) - t$

