2SA699, 2SA699A

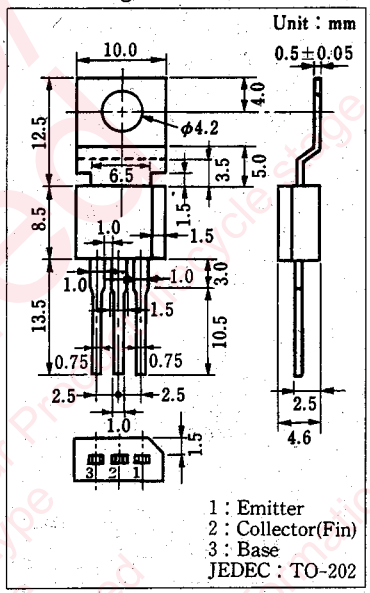
Silicon PNP Epitaxial Planar Type

Power Amplifier
Complementary Pair with 2SC1226, 2SC1226A

■ Feature

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

■ Package Dimensions



■ Absolute Maximum Ratings (Ta=25°C)

Item		Symbol	Value	Unit
Collector-base voltage	2SA699	V_{CBO}	−40	V
	2SA699A		−50	
Collector-emitter voltage	2SA699	V_{CEO}	−32	V
	2SA699A		−40	
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

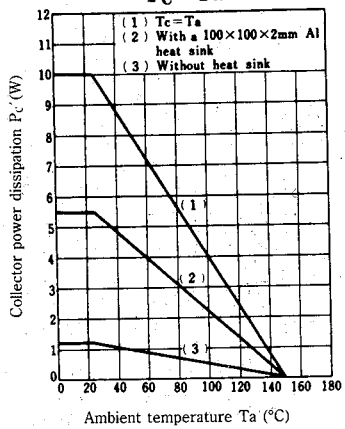
■ Electrical Characteristics (Tc=25°C)

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

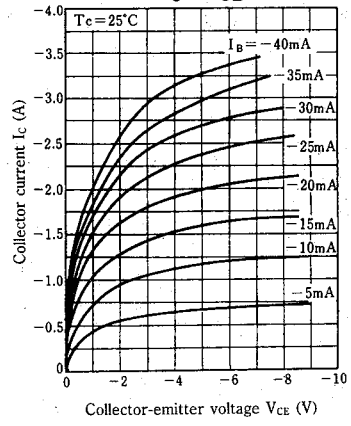
*h_{FE} Classifications

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

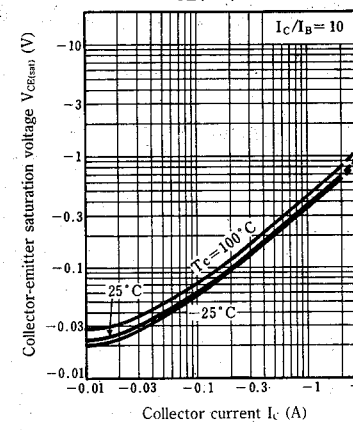
$P_C - Ta$



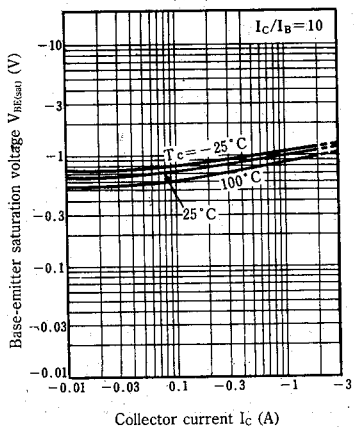
$I_C - V_{CE}$



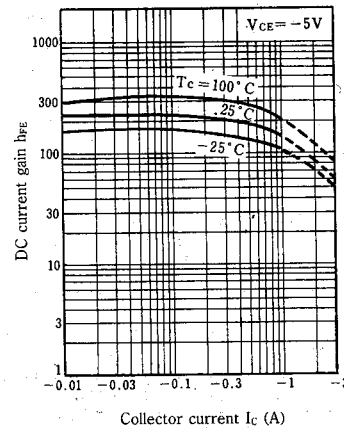
$V_{CE(sat)} - I_C$



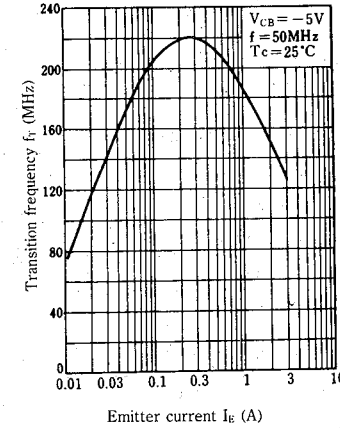
$V_{BE(sat)} - I_C$



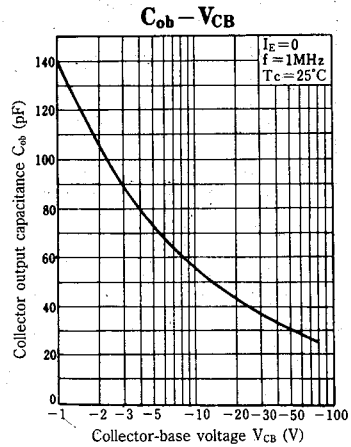
$h_{FE} - I_C$



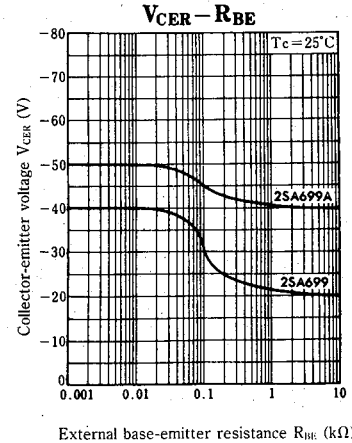
$f_T - I_E$



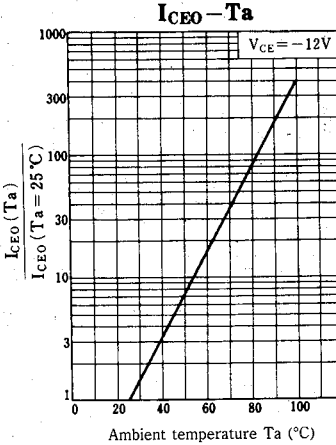
$C_{ob} - V_{CB}$



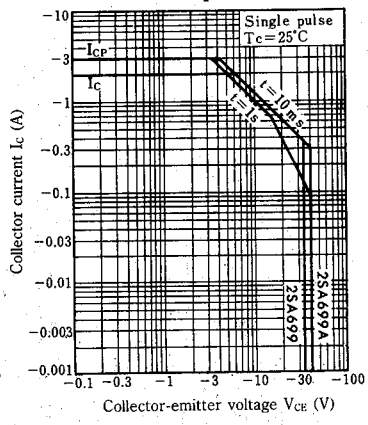
$V_{CER} - R_{BE}$



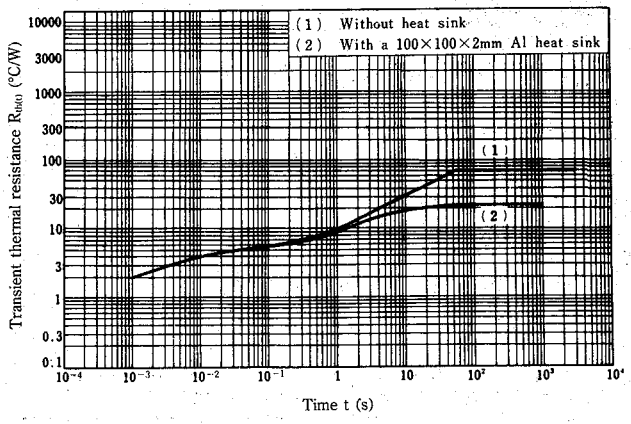
$I_{CEO} - Ta$



Area of safe operation (ASO)



$R_{th\,(t)} - t$



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