

2SB1413

Silicon PNP Epitaxial Planar Type

AF Power Amplifier
Complementary Pair with 2SD2133

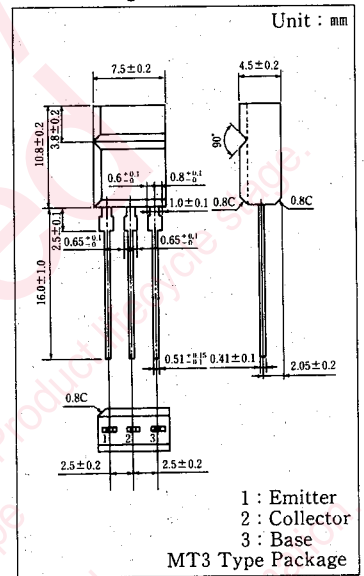
■ Feature

- Automatic mounting by radial taping is possible.

■ Absolute Maximum Ratings (Ta=25°C)

Item	Symbol	Value	Unit
Collector-base voltage	V_{CB0}	-45	V
Collector-emitter voltage	V_{CE0}	-35	V
Emitter-base voltage	V_{EB0}	-5	V
Peak collector current	I_{CP}	-1.5	A
Collector current	I_C	-1	A
Collector power dissipation	P_C	1.5	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 ~ +150	°C

■ Package Dimensions



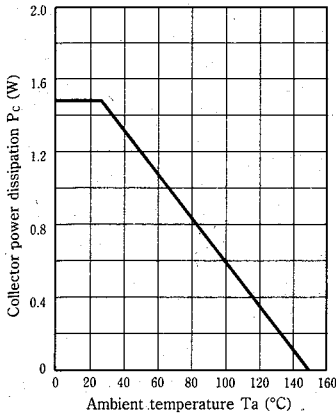
■ Electrical Characteristics (Tc=25°C)

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = -20V, I_E = 0$			-0.1	μA
	I_{CEO}	$V_{CE} = -20V, I_B = 0$			-100	
Emitter cutoff current	I_{EBO}	$V_{EB} = -5V, I_C = 0$			-10	μA
Collector-base voltage	V_{CB0}	$I_C = -10\mu A, I_E = 0$	-45			V
Collector-emitter voltage	V_{CE0}	$I_C = -2mA, I_B = 0$	-35			V
DC current gain	h_{FE1}^*	$V_{CE} = -10V, I_C = -500mA$	85		340	
	h_{FE2}	$V_{CE} = -5V, I_C = -1A$	50			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -500mA, I_B = -50mA$			-0.5	V
Transition frequency	f_T	$V_{CB} = -10V, I_E = 50mA, f = 200MHz$		200		MHz
Collector output capacitance	C_{ob}	$V_{CB} = -10V, I_E = 0, f = 1MHz$		20	30	pF

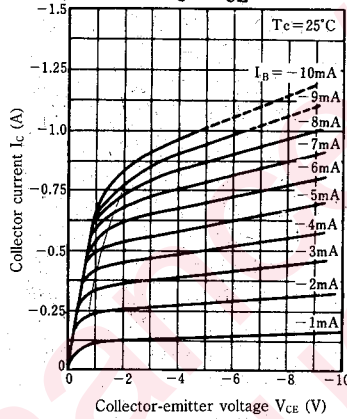
* h_{FE1} Classifications

Class	Q	R	S
h_{FE1}	85~170	120~240	170~340

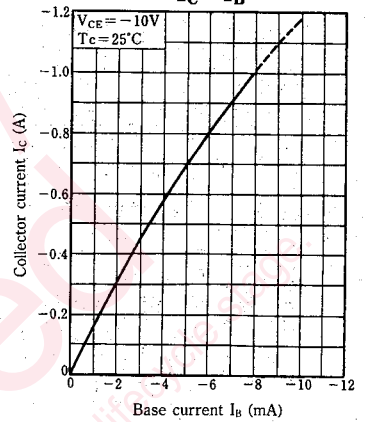
$P_c - T_a$



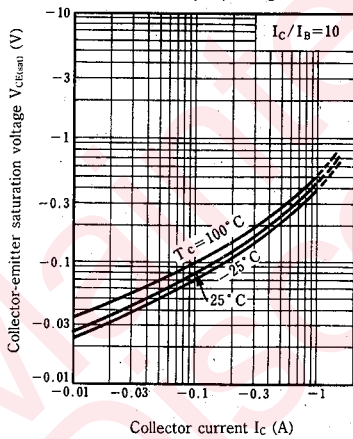
$I_c - V_{CE}$



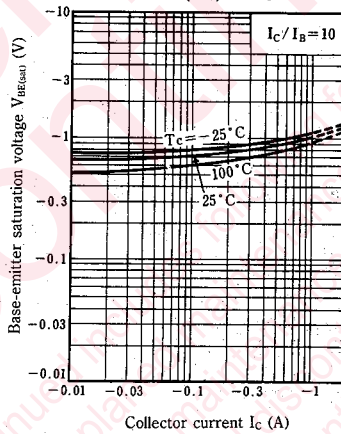
$I_c - I_B$



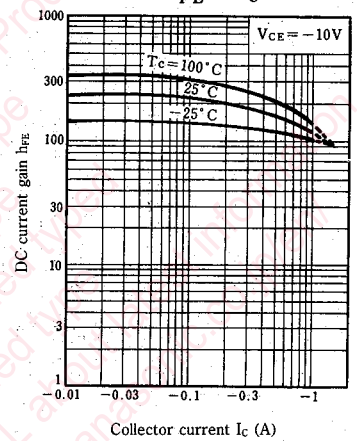
$V_{CE(sat)} - I_c$



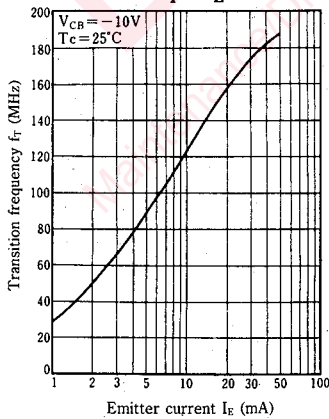
$V_{BE(sat)} - I_c$



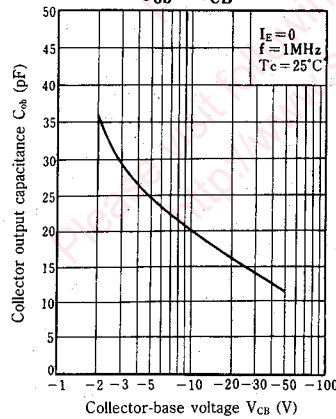
$h_{FE} - I_c$



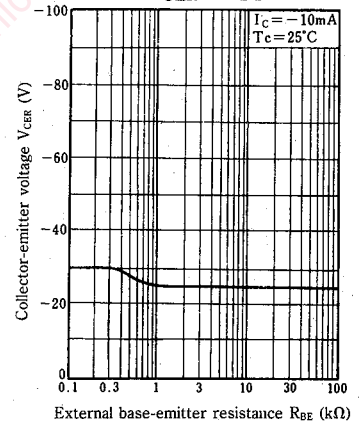
$f_T - I_E$

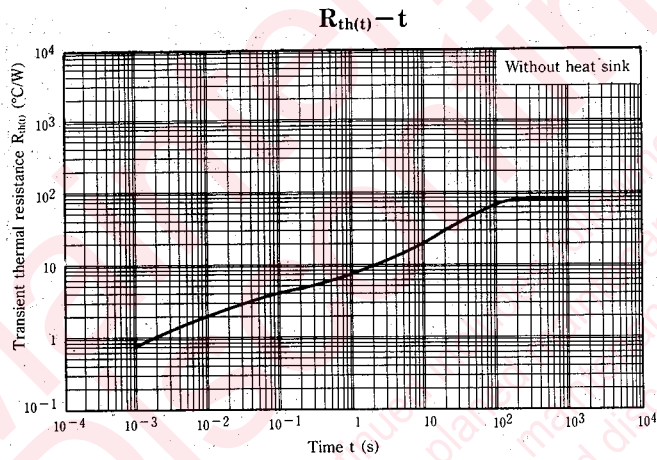
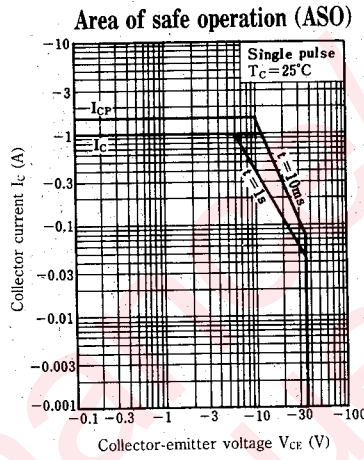
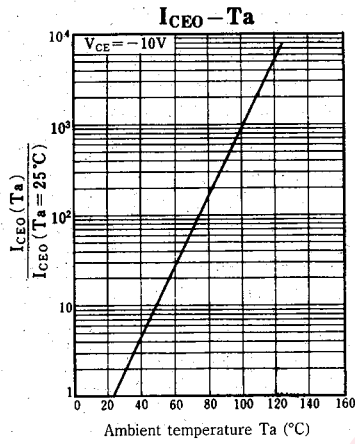


$C_{ob} - V_{CB}$



$V_{CE} - R_{BE}$





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