2SB1414

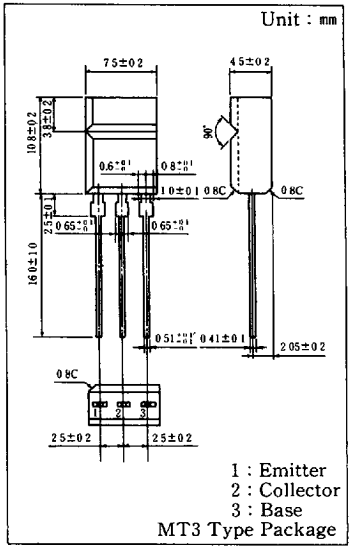
Silicon PNP Epitaxial Planar Type

AF Drivers, High Power Amplifier
Complementary Pair with 2SD2134

■ Features

- Very good linearity of DC current gain (h_{FE})
- High transition frequency (f_T)
- Automatic mounting by radial taping is possible.

■ Package Dimensions



■ Absolute Maximum Ratings (Ta=25°C)

Item	Symbol	Value	Unit
Collector-base voltage	V_{CBO}	−180	V
Collector-emitter voltage	V_{CEO}	−180	V
Emitter-base voltage	V_{EBO}	−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

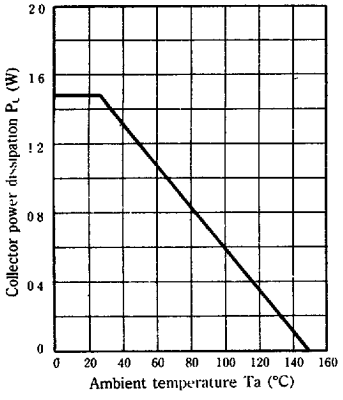
■ Electrical Characteristics (Tc=25°C)

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector-emitter voltage	V_{CEO}	I_C=−100μA, I_B=0	−180			V
Emitter-base voltage	V_{EBO}	I_E=−10μA, I_C=0	−5			V
DC current gain	h_{FE1}*	V_{CE}=−10V, I_C=−150mA	65	160	330	
	h_{FE2}	V_{CE}=−5V, I_C=−500mA	50	100		
Collector-emitter saturation voltage	$V_{CE\ (sat)}$	I_C=−500mA, I_B=−50mA		−0.5	−2.0	V
Base-emitter saturation voltage	$V_{BE\ (sat)}$	I_C=−500mA, I_B=−50mA		−1.0	−2.0	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		30	50	pF

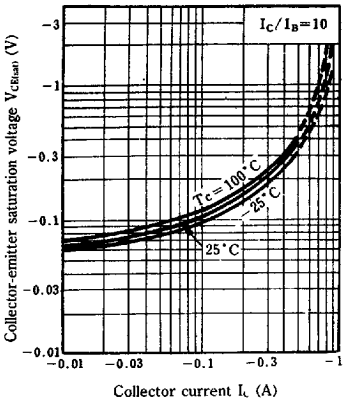
*h_{FE1} Classifications

Class	P	Q	R	S
h_{FE1}	65~110	90~155	130~220	185~330

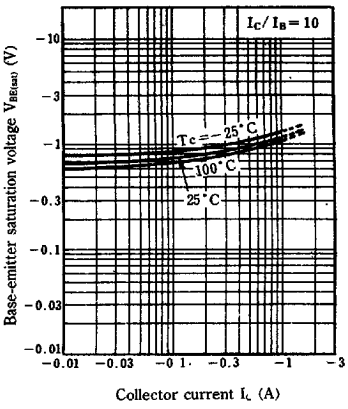
$P_C - Ta$



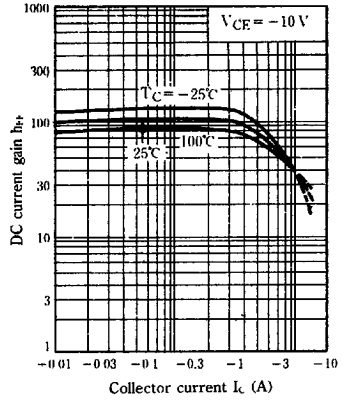
$V_{CE(sat)} - I_C$



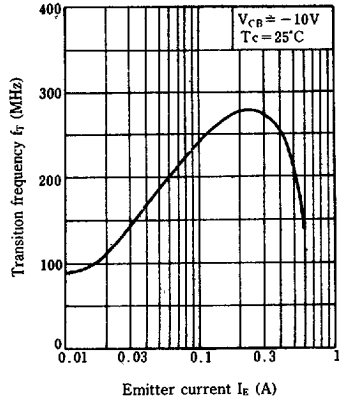
$V_{BE(sat)} - I_C$



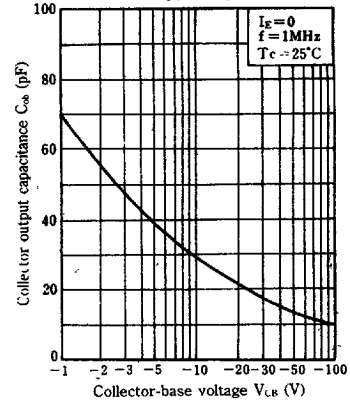
$h_{FE} - I_C$



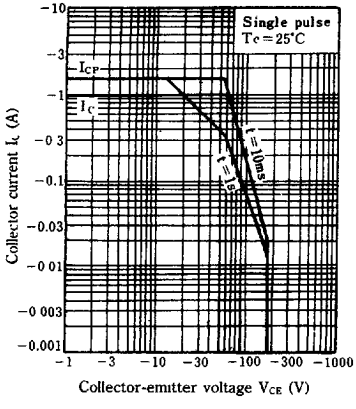
$f_T - I_E$



$C_{ob} - V_{CB}$



Area of safe operation (ASO)



$R_{th(t)} - t$