2SD2134

Silicon NPN Epitaxial Planar Type

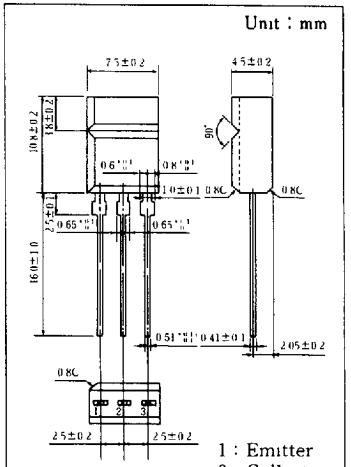
AF Driver, High Power Amplifier
Complementary Pair with 2SB1414

■ Features

- Very good linearity of DC current gain (h_{FE})
- High transition frequency (f_T)
- Optimum for the driver of 60~100W in complementary pair with 2SB1414

■ Package Dimensions

Unit : mm



■ 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

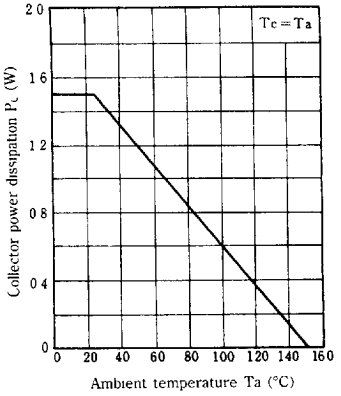
■ Electrical Characteristics (Tc=25°C)

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector-emitter voltage	V_{CBO}	I_C=100μA	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	90	160	330	
	h_{FE2}	V_{CE}=5V, I_C=500mA	50			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=500mA, I_B=50mA		0.5	2	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=500mA, I_B=50mA		1	2	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		pF

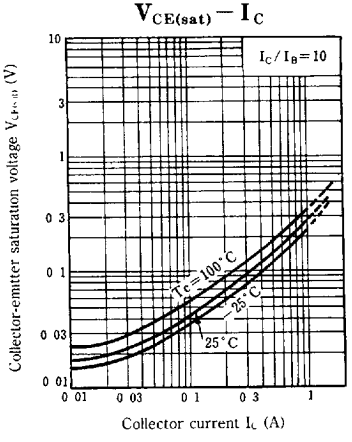
*h_{FE1} Classifications

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

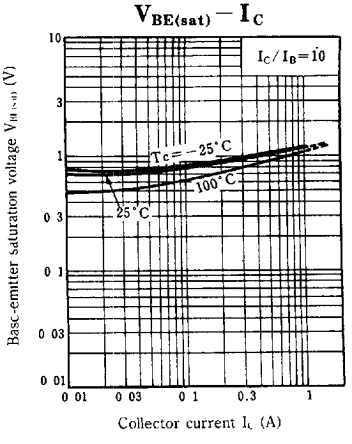
$P_C - Ta$



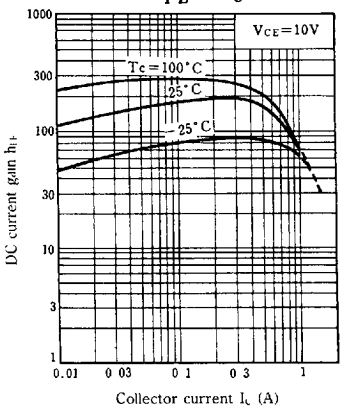
$V_{CE(sat)} - I_C$



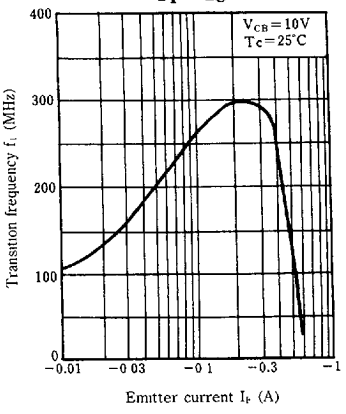
$V_{BE(sat)} - I_C$



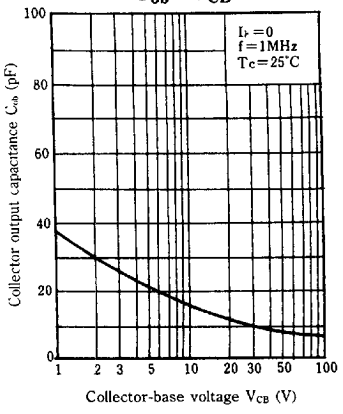
$h_{FE} - I_C$



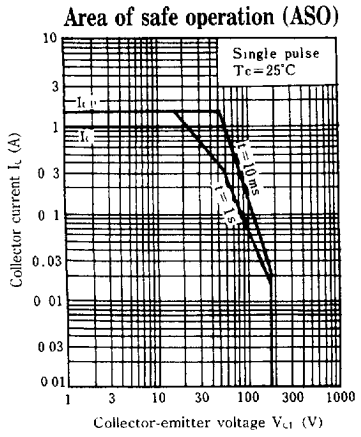
$f_T - I_C$



$C_{ob} - V_{CB}$



Area of safe operation (ASO)



$R_{th(t)} - t$