2SA1185

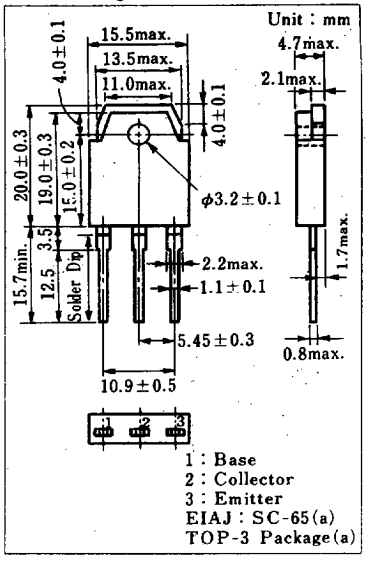
Silicon PNP Epitaxial Planar Type

High Power Amplifiers

■ Features

- Low collector-emitter saturation voltage ($V_{CE(sat)}$)
- Good linearity of DC current gain (h_{FE})
- Large collector current

■ Package Dimensions



■ Absolute Maximum Ratings (Tc=25°C)

Item		Symbol	Value	Unit
Collector-base voltage		V_{CBO}	−50	V
Collector-emitter voltage		V_{CEO}	−50	V
Emitter-base voltage		V_{EBO}	−5	V
Peak collector current		I_{CP}	−15	A
Collector current		I_C	−7	A
Peak base current		I_{BP}	−5	A
Collector power dissipation	Tc=25℃	P_C	60	W
	Ta=25℃		2.5	
Junction temperature		T_j	150	℃
Storage temperature		T_{stg}	−55～+150	℃

■ Electrical Characteristics (Tc=25°C)

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	I_{CBO}	$V_{CB}=-50$ V, $I_E=0$			−1	mA
Emitter cutoff current	I_{EBO}	$V_{EB}=5$ V, $I_C=0$			−2	mA
Collector-emitter voltage	V_{CEO}	$I_C=-100$ mA, $I_B=0$	−50			V
DC current gain	h_{FE1}*	$V_{CE}=-5$ V, $I_C=1$ A	60		320	
	h_{FE2}	$V_{CE}=-5$ V, $I_C=-7$ A	20			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-7$ A, $I_B=-0.7$ A			−0.8	V
Base-emitter saturation voltage	V_{BE}	$V_{CE}=-5$ V, $I_C=-7$ A			−1.5	V
Transition frequency	f_T	$V_{CE}=-5$V, $I_C=-0.5$A, f=10MHz		100		MHz
Collector output capacitance	C_{ob}	$V_{CB}=-10$ V, $I_E=0$, f=1MHz		250		pF

*h_{FE1} Classifications

Class	Q	P	O
h_{FE1}	60～120	100～200	160～320

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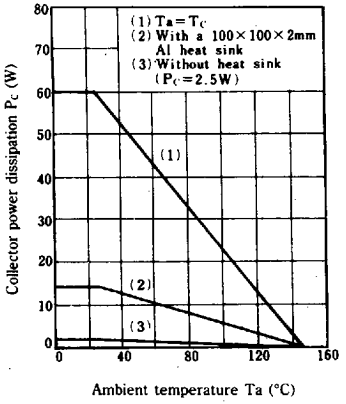
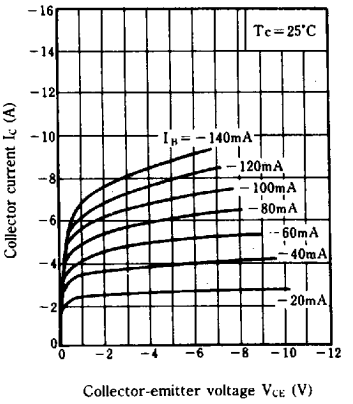
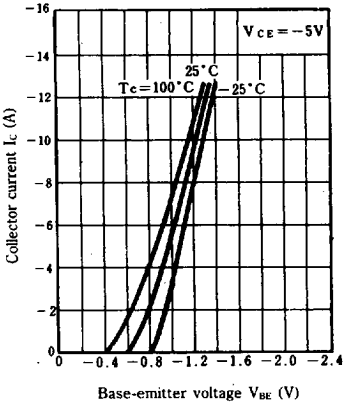
$P_C - Ta$



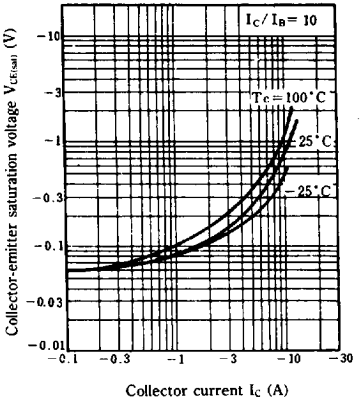
$I_C - V_{CE}$



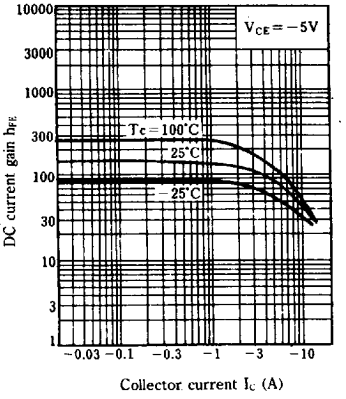
$I_C - V_{BE}$



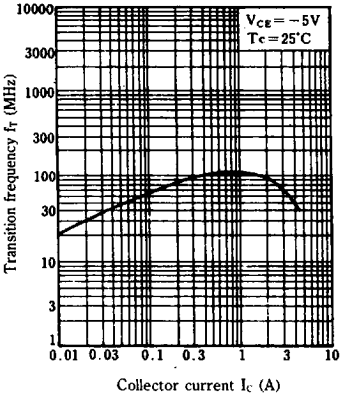
$V_{CE(sat)} - I_C$



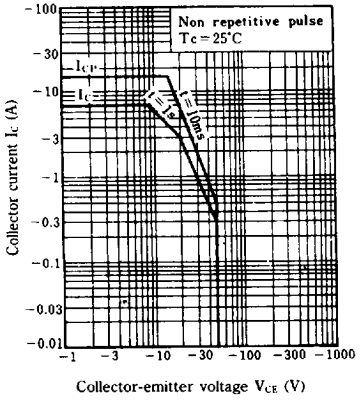
$h_{FE} - I_C$



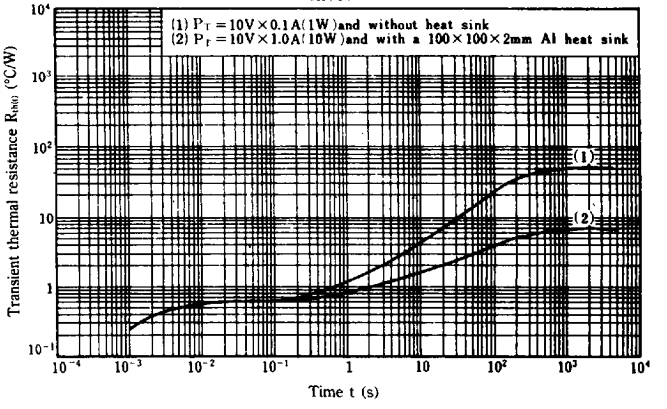
$f_T - I_C$



Area of safe operation (ASO)



$R_{th(t)} - t$



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