

2SC2188

Silicon NPN epitaxial planar type

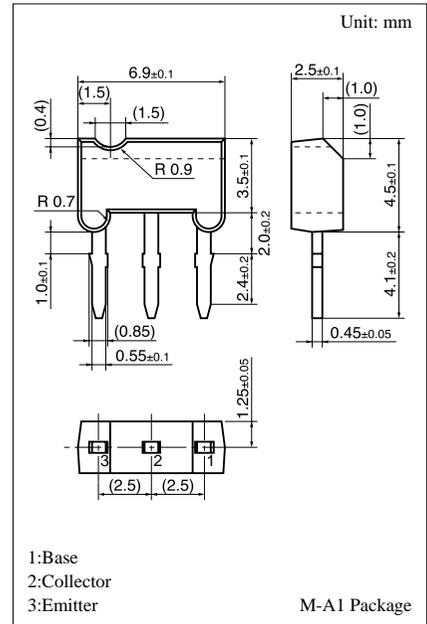
For intermediate frequency amplification of TV image

Features

- High transition frequency f_T .
- Satisfactory linearity of forward current transfer ratio h_{FE} .
- M type package allowing easy automatic and manual insertion as well as stand-alone fixing to the printed circuit board.

Absolute Maximum Ratings ($T_a=25^\circ\text{C}$)

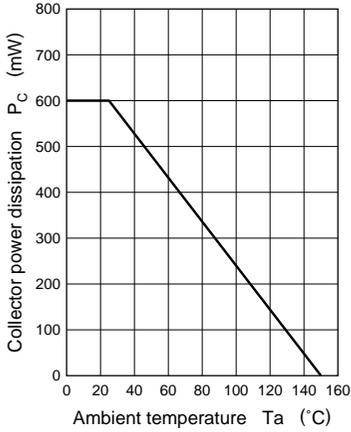
Parameter	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	45	V
Collector to emitter voltage	V_{CEO}	35	V
Emitter to base voltage	V_{EBO}	4	V
Collector current	I_C	50	mA
Collector power dissipation	P_C	600	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 ~ +150	$^\circ\text{C}$



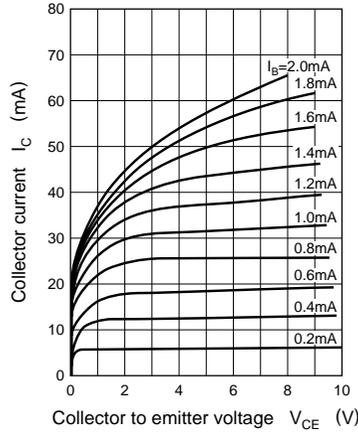
Electrical Characteristics ($T_a=25^\circ\text{C}$)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CEO}	$V_{CE} = 20\text{V}, I_B = 0$			10	μA
Collector to base voltage	V_{CBO}	$I_C = 10\mu\text{A}, I_E = 0$	45			V
Collector to emitter voltage	V_{CEO}	$I_C = 1\text{mA}, I_B = 0$	35			V
Emitter to base voltage	V_{EBO}	$I_E = 10\mu\text{A}, I_C = 0$	4			V
Forward current transfer ratio	h_{FE}	$V_{CB} = 10\text{V}, I_E = -10\text{mA}$	20	50	100	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 20\text{mA}, I_B = 2\text{mA}$			0.5	V
Transition frequency	f_T	$V_{CB} = 10\text{V}, I_E = -10\text{mA}, f = 100\text{MHz}$	300	500		MHz
Common emitter reverse transfer capacitance	C_{re}	$V_{CE} = 10\text{V}, I_C = 1\text{mA}$			1.5	pF
Power gain	PG	$V_{CB} = 10\text{V}, I_E = -10\text{mA}, f = 58\text{MHz}$		18		dB

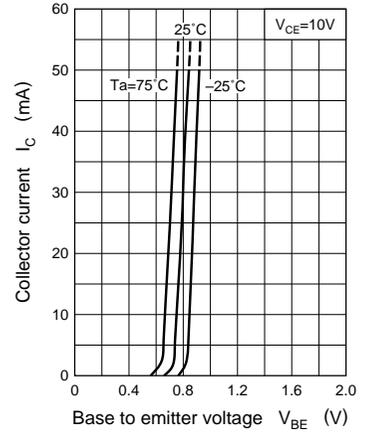
$P_C - T_a$



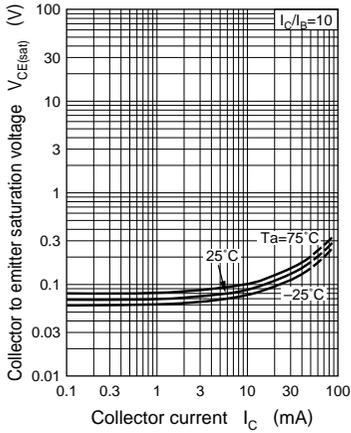
$I_C - V_{CE}$



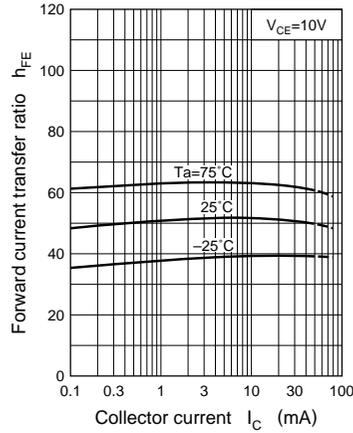
$I_C - V_{BE}$



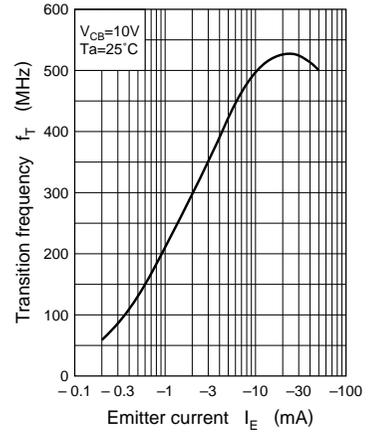
$V_{CE(sat)} - I_C$



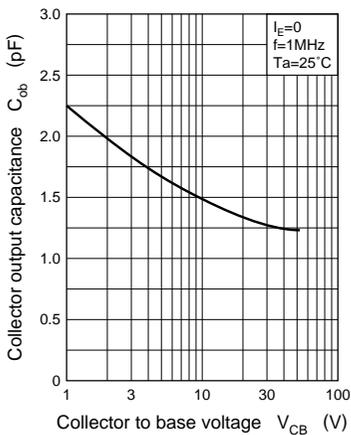
$h_{FE} - I_C$



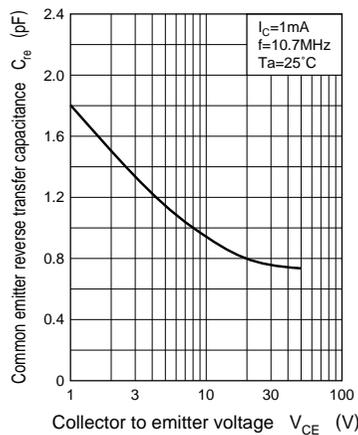
$f_T - I_E$



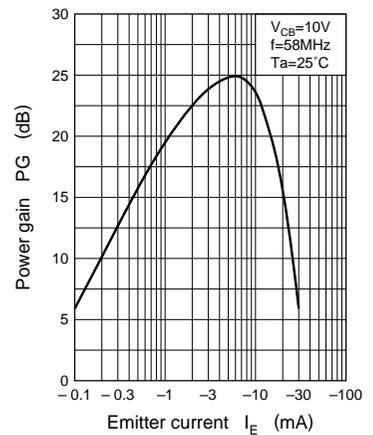
$C_{ob} - V_{CB}$



$C_{re} - V_{CE}$



$PG - I_E$



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