

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

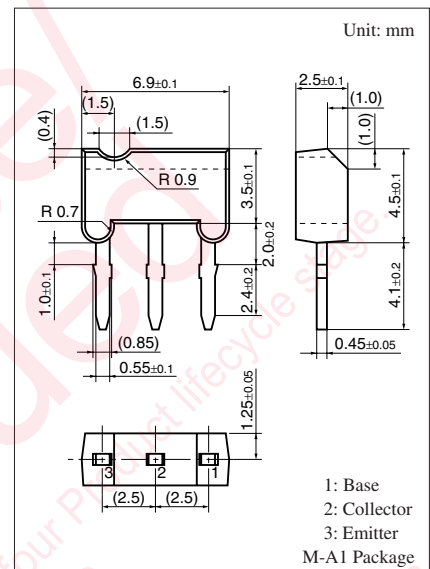
■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

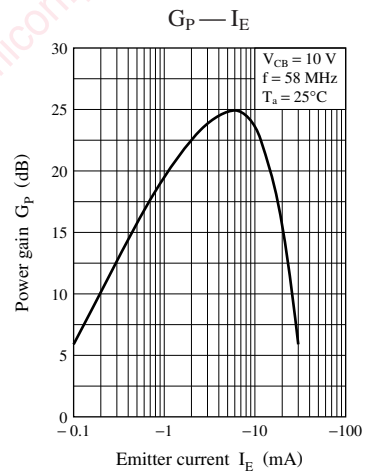
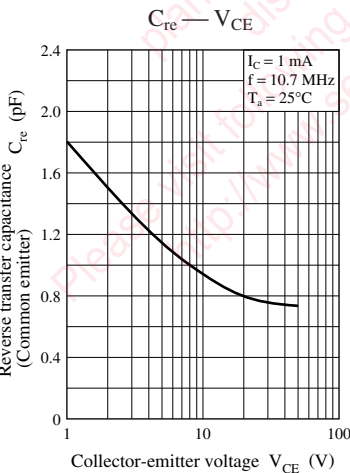
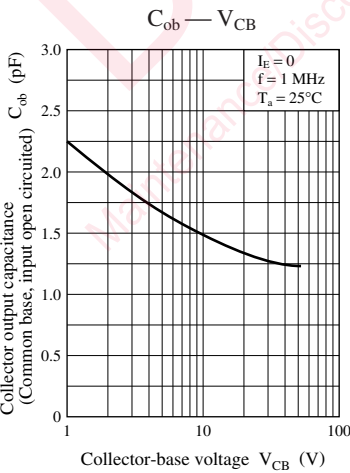
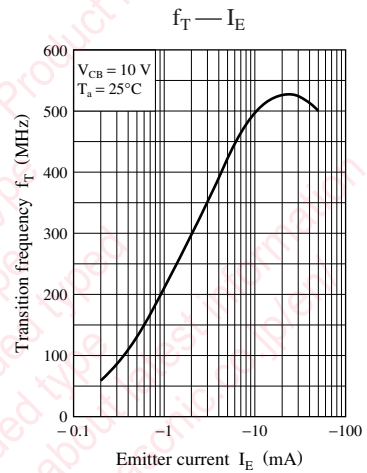
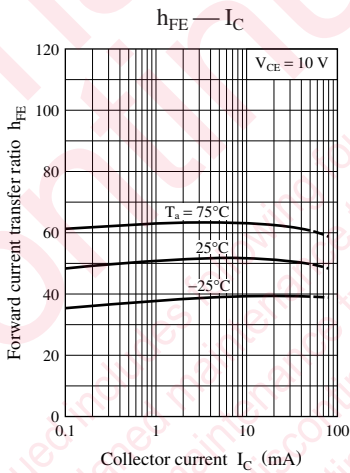
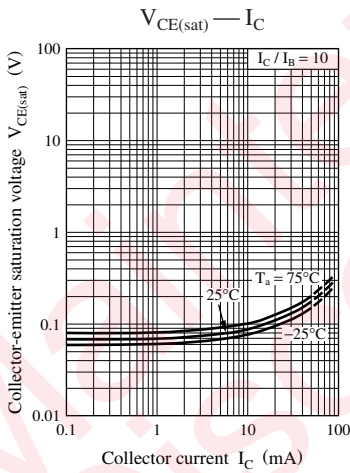
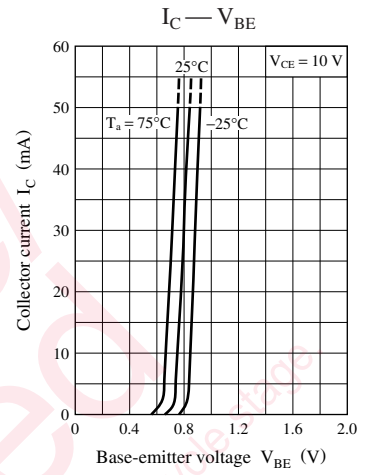
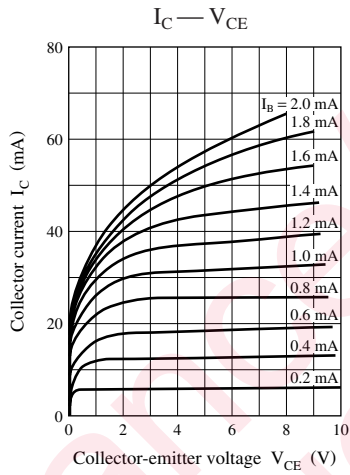
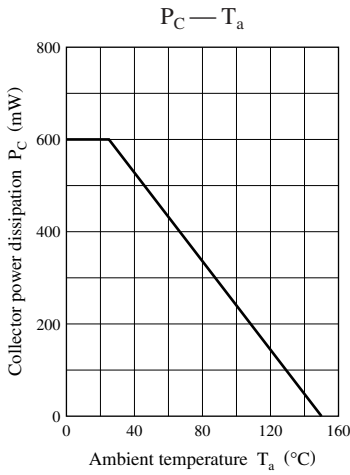
Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	45	V
Collector-emitter voltage (Base open)	V_{CEO}	35	V
Emitter-base voltage (Collector open)	V_{EBO}	4	V
Collector current	I_C	50	mA
Collector power dissipation	P_C	600	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage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

■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	$I_C = 10 \mu\text{A}, I_E = 0$	45			V
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = 1 \text{ mA}, I_B = 0$	35			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = 10 \mu\text{A}, I_C = 0$	4			V
Collector-emitter cutoff current (Base open)	I_{CEO}	$V_{CE} = 20 \text{ V}, I_B = 0$			10	μA
Forward current transfer ratio	h_{FE}	$V_{CB} = 10 \text{ V}, I_E = -10 \text{ mA}$	20	50	100	—
Collector-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
Reverse transfer capacitance (Common emitter)	C_{re}	$V_{CB} = 10 \text{ V}, I_E = -1 \text{ mA}, f = 10.7 \text{ MHz}$			1.5	pF
Power gain	G_p	$V_{CB} = 10 \text{ V}, I_E = -10 \text{ mA}, f = 58 \text{ MHz}$		18		dB

Note) Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.





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