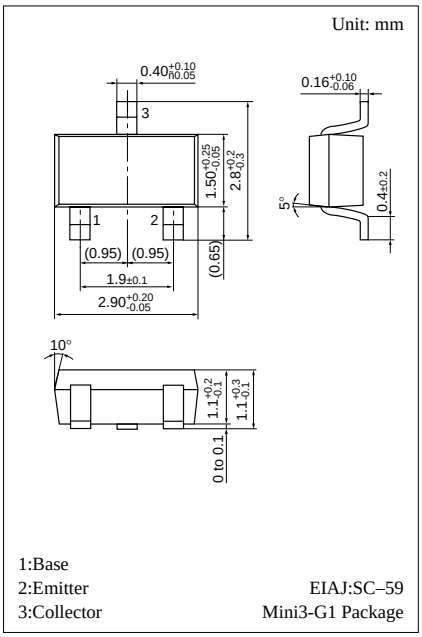
2SC5216

Silicon NPN epitaxial planer type

For high-frequency amplification/oscillation/mixing



Marking symbol : FB

Features

- High transition frequency f_T.
- Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing.

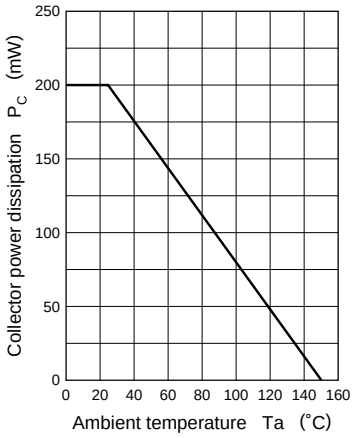
Absolute Maximum Ratings (Ta=25˚C)

Parameter	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	15	V
Collector to emitter voltage	V_{CEO}	8	V
Emitter to base voltage	V_{EBO}	3	V
Collector current	I_C	50	mA
Collector power dissipation	P_C	200	mW
Junction temperature	T_j	150	˚C
Storage temperature	T_{stg}	–55 ~ +150	˚C

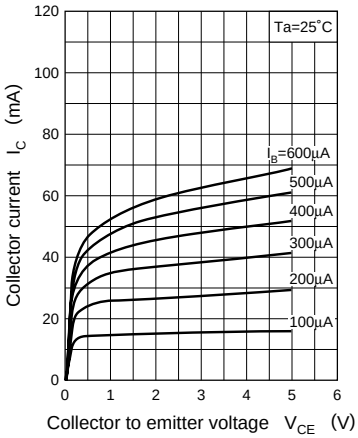
Electrical Characteristics (Ta=25˚C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Emitter cutoff current	I_{EBO}	V_{EB} = 2V, I_C = 0			2	µA
Collector to base voltage	V_{CBO}	I_C = 100µA, I_E = 0	15			V
Forward current transfer ratio	h_{FE}	V_{CE} = 4V, I_C = 2mA	100		350	
Collector to emitter saturation voltage	$V_{CE(sat)}$	I_C = 20mA, I_B = 4mA			0.5	V
Base to emitter voltage	V_{BE}	V_{CE} = 4V, I_C = 2mA		0.7		V
Transition frequency	f_T	V_{CB} = 10V, I_E = –15mA, f = 200MHz	0.8	1.3	1.9	GHz
Collector output capacitance	C_{ob}	V_{CB} = 10V, I_E = 0, f = 1MHz	0.6	1.0	1.4	pF
Common emitter reverse transfer capacitance	C_{rb}	V_{CB} = 6V, I_E = 0, f = 1MHz		0.4		pF
Power gain	PG	V_{CB} = 10V, I_E = –10mA, f = 200MHz	14	18	22	dB
h_{FE} ratio	$h_{FE(RATIO)}$	V_{CE} = 4V, I_C = 100µA / V_{CE} = 4V, I_C = 2mA	0.6		1.5	

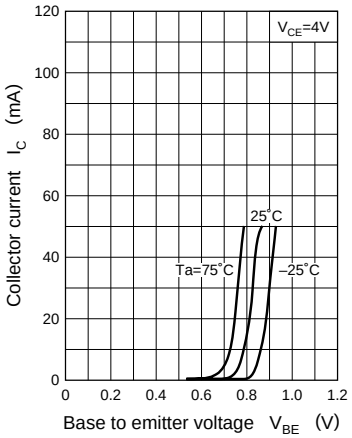
P_C — Ta



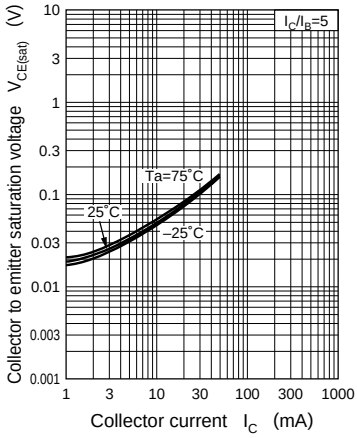
I_C — V_{CE}



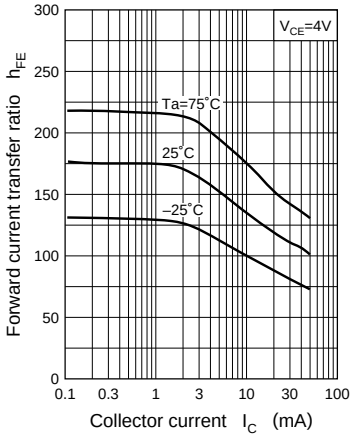
I_C — V_{BE}



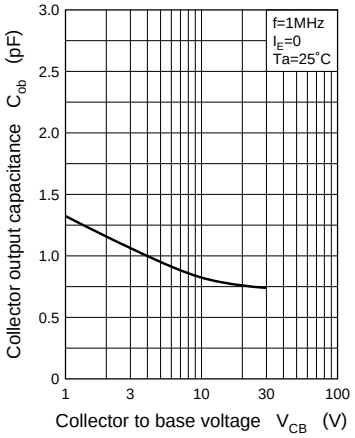
$V_{CE(sat)}$ — I_C



h_{FE} — I_C



C_{ob} — V_{CB}



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