

# 2SC5216

Silicon NPN epitaxial planer type

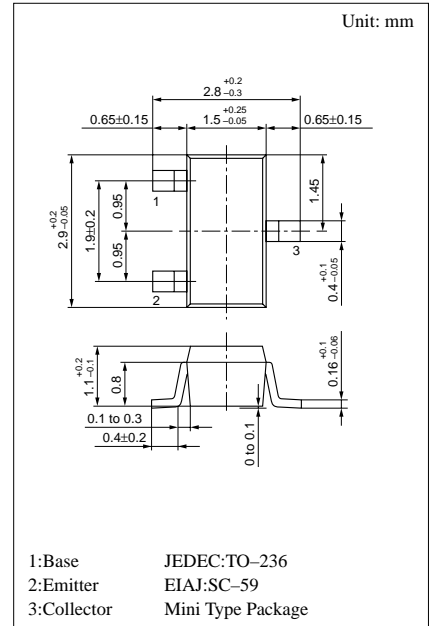
For high-frequency amplification/oscillation/mixing

## ■ 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

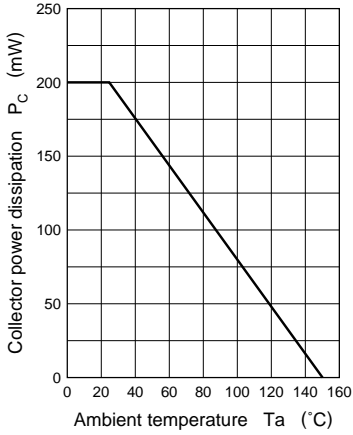


Marking symbol : FB

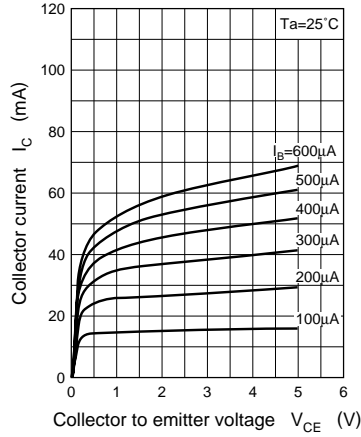
## ■ Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Emitter cutoff current	$I_{EBO}$	$V_{EB} = 2V, I_C = 0$			2	$\mu A$
Collector to base voltage	$V_{CBO}$	$I_C = 100\mu A, I_E = 0$	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	$h_{FE(RATIO)}$	$V_{CE} = 4V, I_C = 100\mu A$	0.6		1.5	
		$V_{CE} = 4V, I_C = 2mA$				

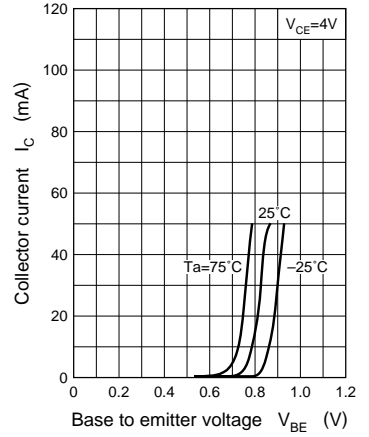
$P_C - T_a$



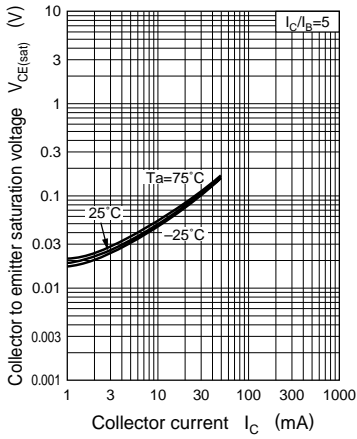
$I_C - V_{CE}$



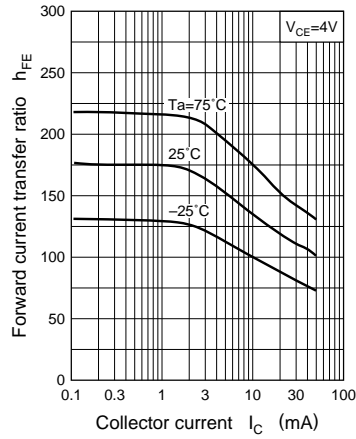
$I_C - V_{BE}$



$V_{CE(sat)} - I_C$



$h_{FE} - I_C$



$C_{ob} - V_{CB}$

