# 2SC4417

**Transistors** 

## Silicon NPN epitaxial planar type

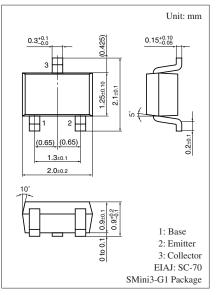
For intermediate frequency amplification of TV image

#### ■ Features

- High transition frequency f<sub>T</sub>
- Satisfactory linearity of forward current transfer ratio h<sub>FE</sub>
- S-Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing

### ■ Absolute Maximum Ratings $T_a = 25$ °C

Parameter	Symbol	Rating	Unit	
Collector-base voltage (Emitter open)	V <sub>CBO</sub>	45	V	
Collector-emitter voltage (Base open)	V <sub>CEO</sub>	35	V	
Emitter-base voltage (Collector open)	$V_{EBO}$	4	V	
Collector current	$I_C$	50	mA	
Collector power dissipation	P <sub>C</sub>	150	mW	
Junction temperature	$T_{j}$	150	°C	
Storage temperature	$T_{stg}$	-55 to +150	°C	



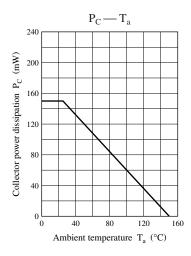
Marking Symbol: 2Z

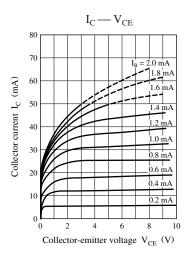
## $\blacksquare$ Electrical Characteristics $T_a = 25 ^{\circ}C \pm 3 ^{\circ}C$

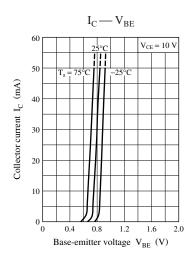
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-base voltage (Emitter open)	V <sub>CBO</sub>	$I_C = 10 \mu\text{A},  I_E = 0$	45			V
Collector-emitter voltage (Base open)	V <sub>CEO</sub>	$I_C = 1 \text{ mA}, I_B = 0$	35			V
Emitter-base voltage (Collector open)	$V_{EBO}$	$I_E = 10 \ \mu A, I_C = 0$	4			V
Collector-emitter cutoff current (Base open)	$I_{CEO}$	$V_{CE} = 20 \text{ V}, I_{B} = 0$			10	μΑ
Forward current transfer ratio	h <sub>FE</sub>	$V_{CE} = 10 \text{ V}, I_{C} = 10 \text{ mA}$	20		100	_
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	$I_C = 20 \text{ mA}, I_B = 2 \text{ mA}$			0.5	V
Transition frequency *	$f_T$	$V_{CB} = 10 \text{ V}, I_E = -10 \text{ mA}, f = 200 \text{ MHz}$		500		MHz
Common-emitter reverse transfer	C <sub>re</sub>	$V_{CB} = 10 \text{ V}, I_{E} = -1 \text{ mA}, f = 10.7 \text{ MHz}$			1.5	pF
capacitance						

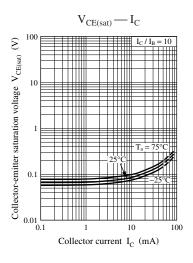
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

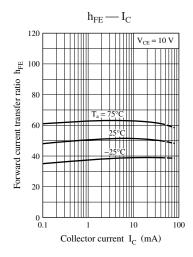
<sup>2. \*:</sup> Pulse measurement

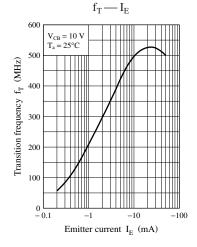


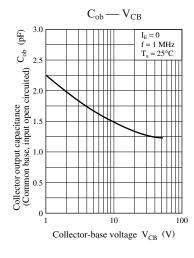


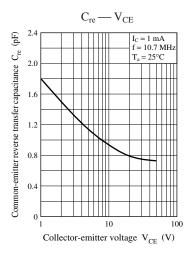












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