

# 2SC4515

## Silicon NPN Epitaxial Planar Type

For 2GH band low-noise amplification

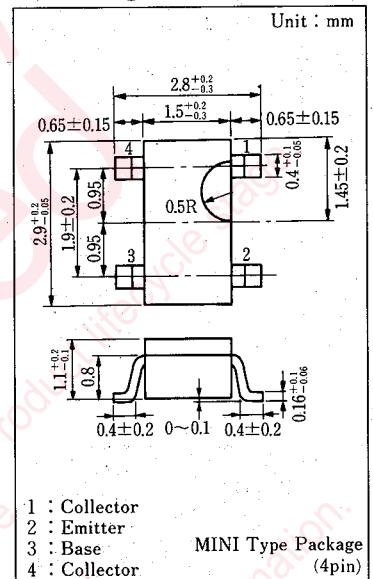
### ■ Features

- High transition frequency  $f_T$
- Low noise figure NF
- A MINI type package that allows downsizing of equipment and automatic insertion by taping and magazine packaging

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

Item	Symbol	Value	Unit
Collector-Base Voltage	$V_{CBO}$	15	V
Collector-Emitter Voltage	$V_{CEO}$	10	V
Emitter-Base Voltage	$V_{EBO}$	2	V
Collector Current	$I_C$	50	mA
Collector Power Dissipation	$P_C$	200	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	$-55 \sim +150$	$^\circ\text{C}$

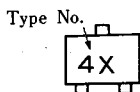
### ■ Package Dimensions

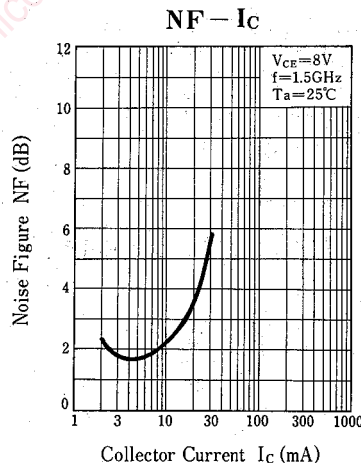
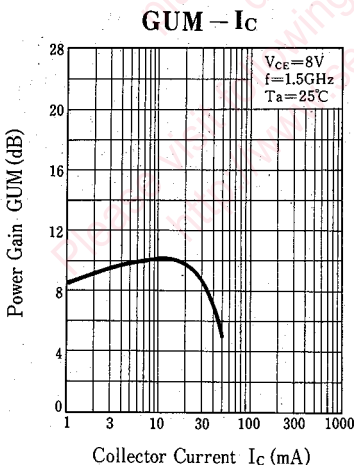
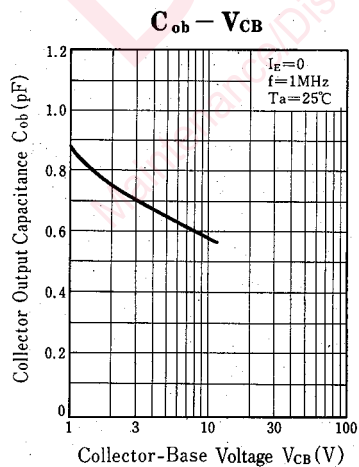
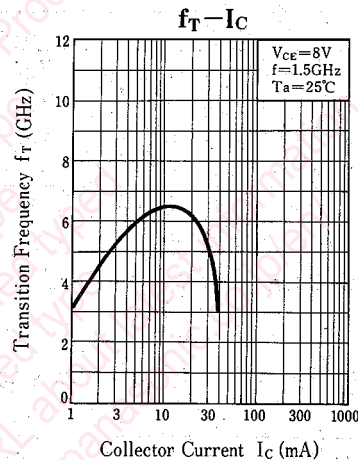
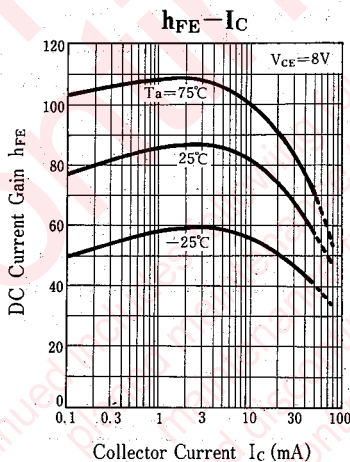
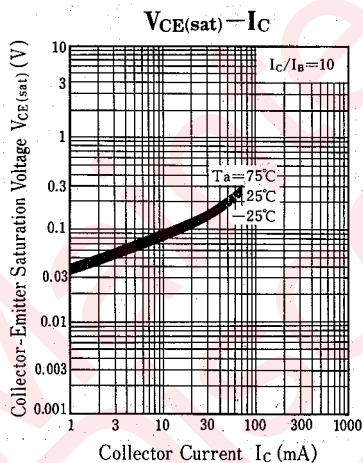
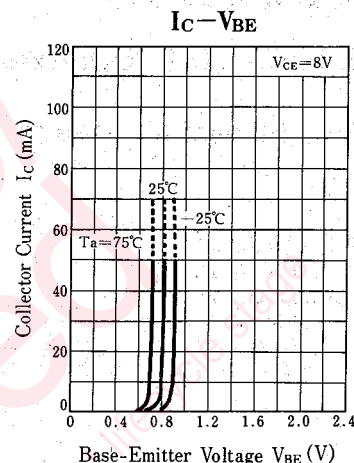
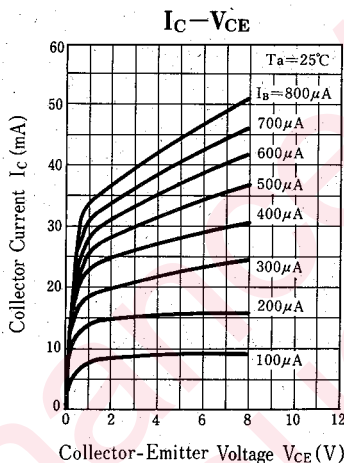
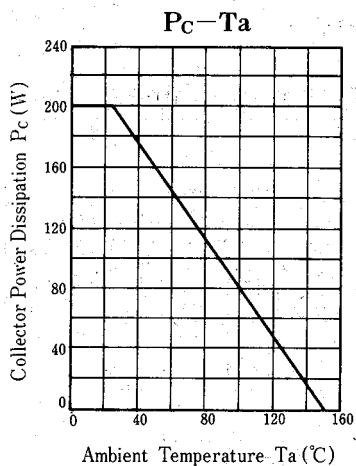


### ■ Electrical Characteristics ( $T_a=25^\circ\text{C}$ )

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=10\text{V}, I_E=0$			1	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=1\text{V}, I_C=0$			1	$\mu\text{A}$
DC Current Gain	$h_{FE}$	$V_{CE}=8\text{V}, I_C=10\text{mA}$	50		300	
Transition Frequency	$f_T$	$V_{CE}=8\text{V}, I_C=10\text{mA}, f=1.5\text{GHz}$		7		GHz
Collector Capacitance	$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		0.6	1.0	pF
Forward Transfer Gain	$ S_{21e} ^2$	$V_{CE}=8\text{V}, I_C=10\text{mA}, f=1.5\text{GHz}$		9.5		dB
Power Gain	GUM	$V_{CE}=8\text{V}, I_C=10\text{mA}, f=1.5\text{GHz}$		10.5		dB
Noise Figure	NF	$V_{CE}=8\text{V}, I_C=4\text{mA}, f=1.5\text{GHz}$		1.7	2.5	dB

### ■ Type Name Marking





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