

## Silicon Epitaxial Planar Transistor

## 2SC2411

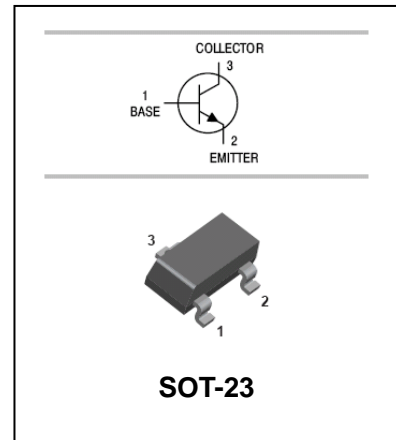
### FEATURES

- Power dissipation:  $P_{CM}=200mW$



### APPLICATIONS

- NPN Silicon Epitaxial Planar Transistor



### ORDERING INFORMATION

Type No.	Marking	Package Code
2SC2411	CP/CQ/CR	SOT-23

### MAXIMUM RATING @ $T_a=25^{\circ}C$ unless otherwise specified

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	40	V
$V_{CEO}$	Collector-Emitter Voltage	32	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current -Continuous	500	mA
$P_C$	Collector Dissipation	200	mW
$T_j, T_{stg}$	Junction and Storage Temperature	-55~150	$^{\circ}C$

### ELECTRICAL CHARACTERISTICS @ $T_a=25^{\circ}C$ unless otherwise specified

**Silicon Epitaxial Planar Transistor****2SC2411**

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	32			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A, I_C=0$	5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=20V, I_E=0$			1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=4V, I_C=0$			1	$\mu A$
DC current gain	$h_{FE}$	$V_{CE}=3V, I_C=100mA$	82		390	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500mA, I_B=50mA$			0.4	V
Collector output capacitance	$C_{ob}$	$V_{CB}=10V, I_E=0$ $f=1MHz$		2.0		pF
Transition frequency	$f_T$	$V_{CE}=5V, I_C=20mA$ $f=100MHz$		250		MHz

**CLASSIFICATION OF  $h_{FE(1)}$** 

Rank	P	Q	R
Range	82-180	120-270	180-390
Marking	CP	CQ	CR

**TYPICAL CHARACTERISTICS @  $T_a=25^\circ C$  unless otherwise specified**

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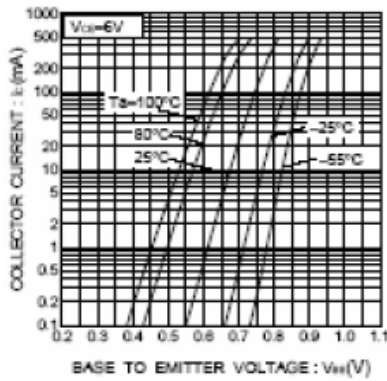


Fig.1 Grounded emitter propagation characteristics

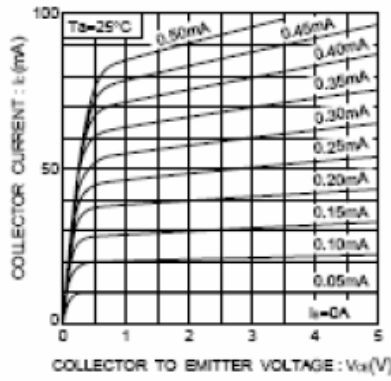


Fig.2 Grounded emitter output characteristics(I)

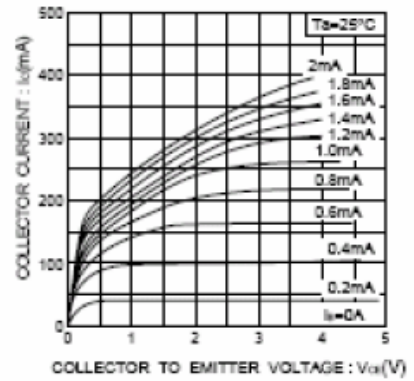


Fig.3 Grounded emitter output characteristics(II)

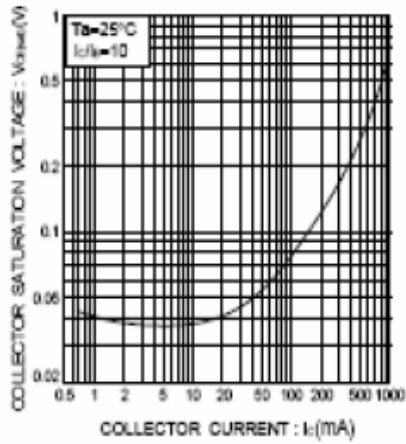


Fig.4 Collector-emitter saturation voltage vs. collector current

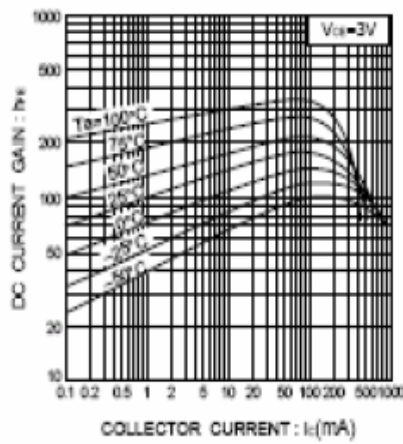


Fig.5 DC current gain vs. collector current

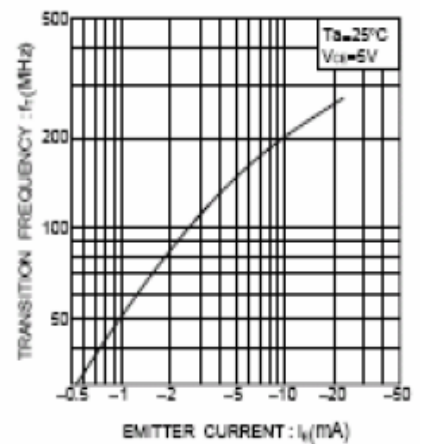


Fig.6 Gain bandwidth product vs. emitter current

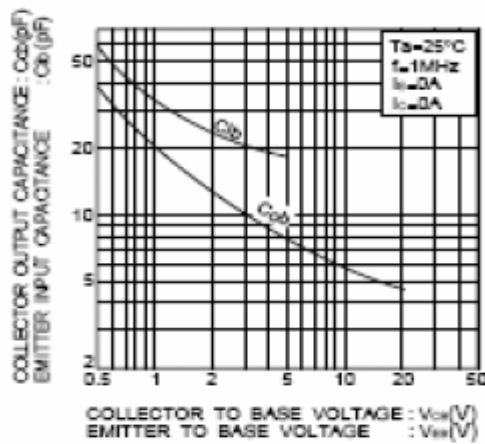


Fig.7 Collector output capacitance vs. collector-base voltage  
Emitter input capacitance vs. emitter-base voltage

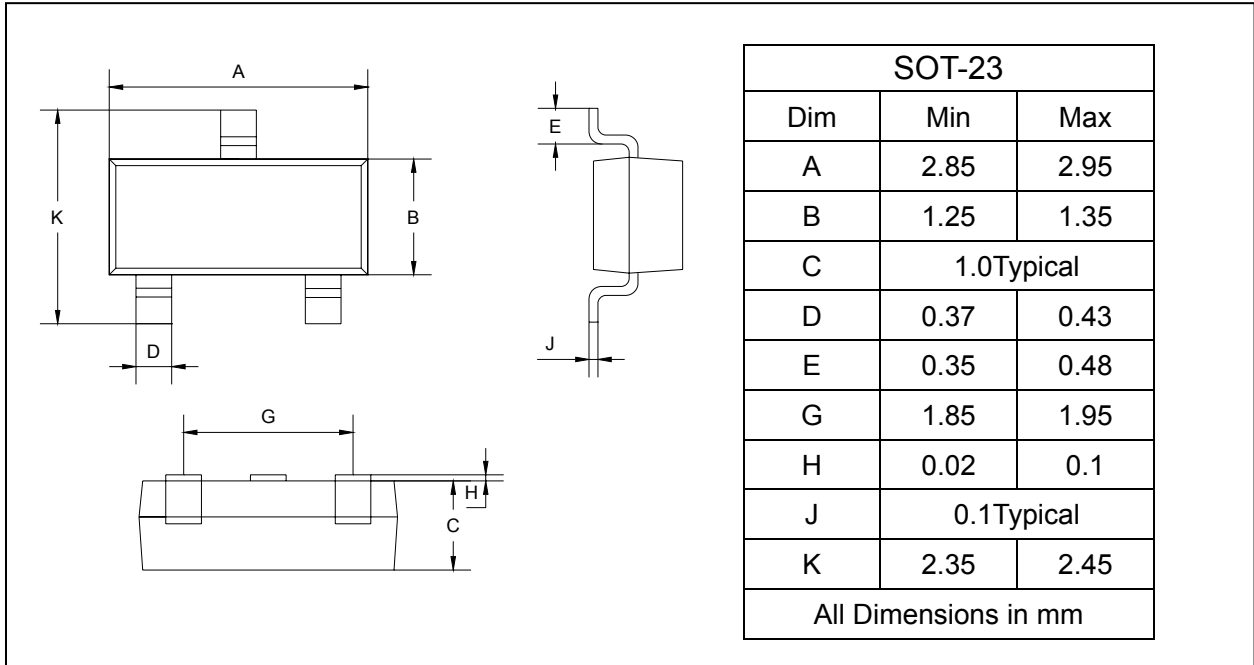
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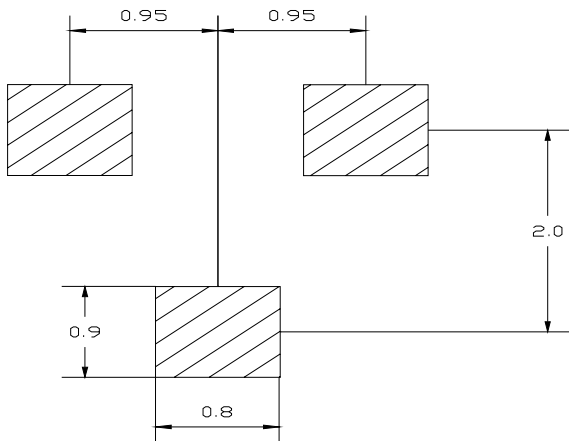
### PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



### SOLDERING FOOTPRINT



Unit : mm

### PACKAGE INFORMATION

Device	Package	Shipping
2SC2411	SOT-23	3000/Tape&Reel