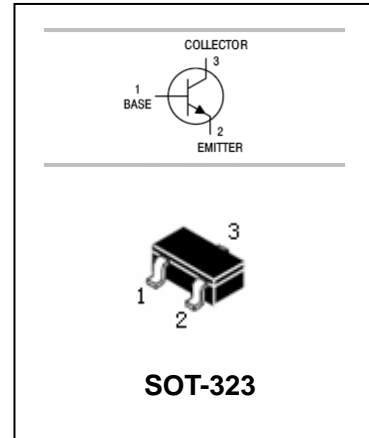


## Silicon Epitaxial Planar Transistor

## 2SC4081W

### FEATURES

- Excellent  $h_{FE}$  linearity.
- Complements the 2A1576A



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### APPLICATIONS

- NPN Silicon Epitaxial Planar Transistor.

### ORDERING INFORMATION

Type No.	Marking	Package Code
2SC4081W	BQ/BR/BS	SOT-323

### MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	60	V
$V_{CEO}$	Collector-Emitter Voltage	50	V
$V_{EBO}$	Emitter-Base Voltage	6	V
$I_C$	Collector Current -Continuous	150	mA
$P_C$	Collector Dissipation	200	mW
$T_j, T_{stg}$	Junction and Storage Temperature	-55~150	°C

### ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

## Silicon Epitaxial Planar Transistor

## 2SC4081W

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=50\mu A, I_E=0$	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=50\mu A, I_C=0$	6			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=60V, I_E=0$			0.1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=6V, I_C=0$			0.1	$\mu A$
DC current gain	$h_{FE}$	$V_{CE}=6V, I_C=1mA$	120		560	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_{CE}=50mA, I_B=5mA$			0.4	V
Transition frequency	$f_T$	$V_{CE}=12V, I_C=2mA, f=30MHz$		180		GHz
Collector output capacitance	$C_{ob}$	$V_{CB}=12V, I_E=0, f=1MHz$			3.5	pF

### CLASSIFICATION OF $h_{FE}$

Rank	Q	R	S
Range	120-270	180-390	270-560
Marking	BQ	BR	BS

## Silicon Epitaxial Planar Transistor

## 2SC4081W

### TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

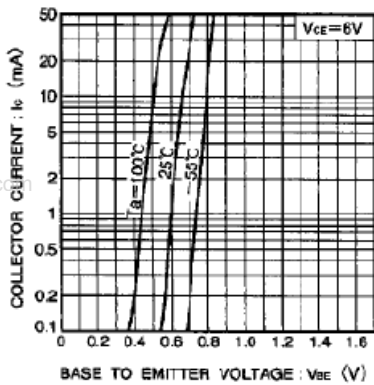


Fig.1 Grounded emitter propagation characteristics

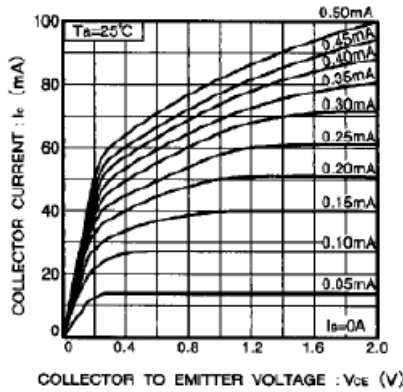


Fig.2 Grounded emitter output characteristics ( I )

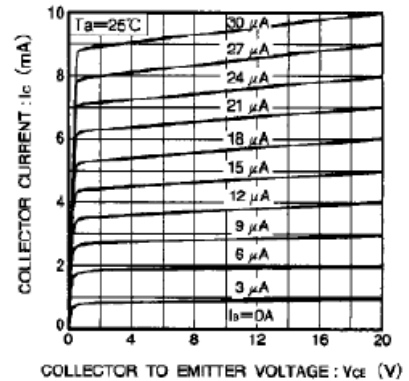


Fig.3 Grounded emitter output characteristics ( II )

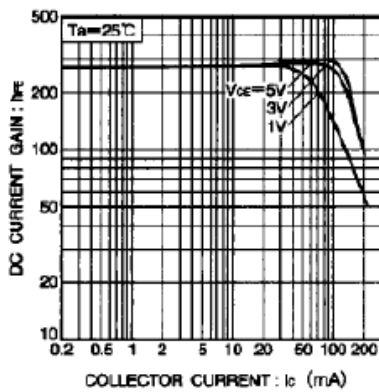


Fig.4 DC current gain vs. collector current ( I )

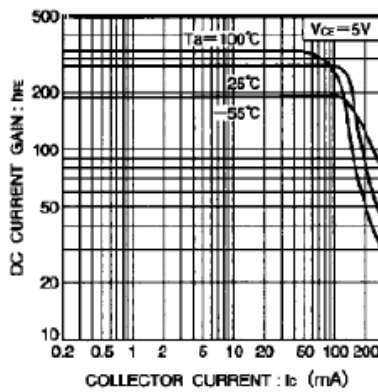


Fig.5 DC current gain vs. collector current ( II )

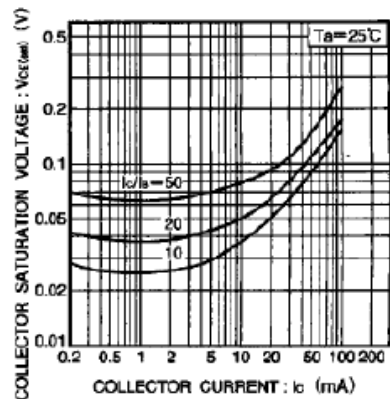


Fig.6 Collector-emitter saturation voltage vs. collector current

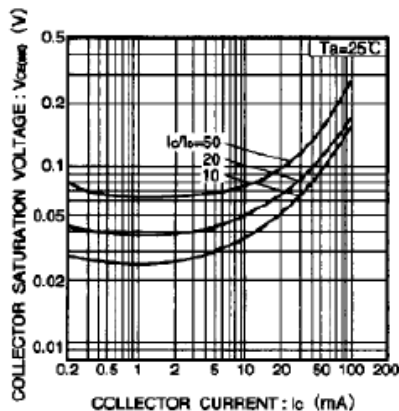


Fig.7 Collector-emitter saturation voltage vs. collector current ( I )

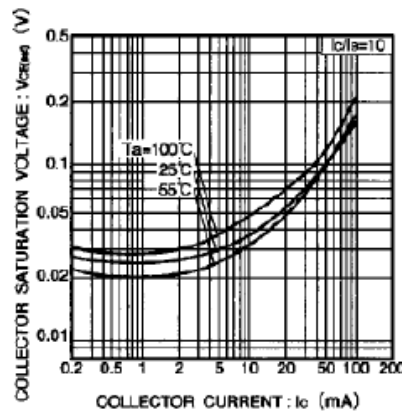


Fig.8 Collector-emitter saturation voltage vs. collector current ( II )

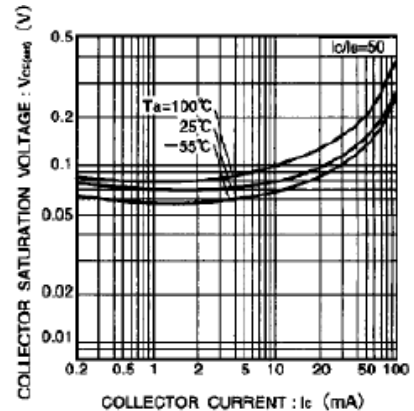


Fig.9 Collector-emitter saturation voltage vs. collector current ( III )

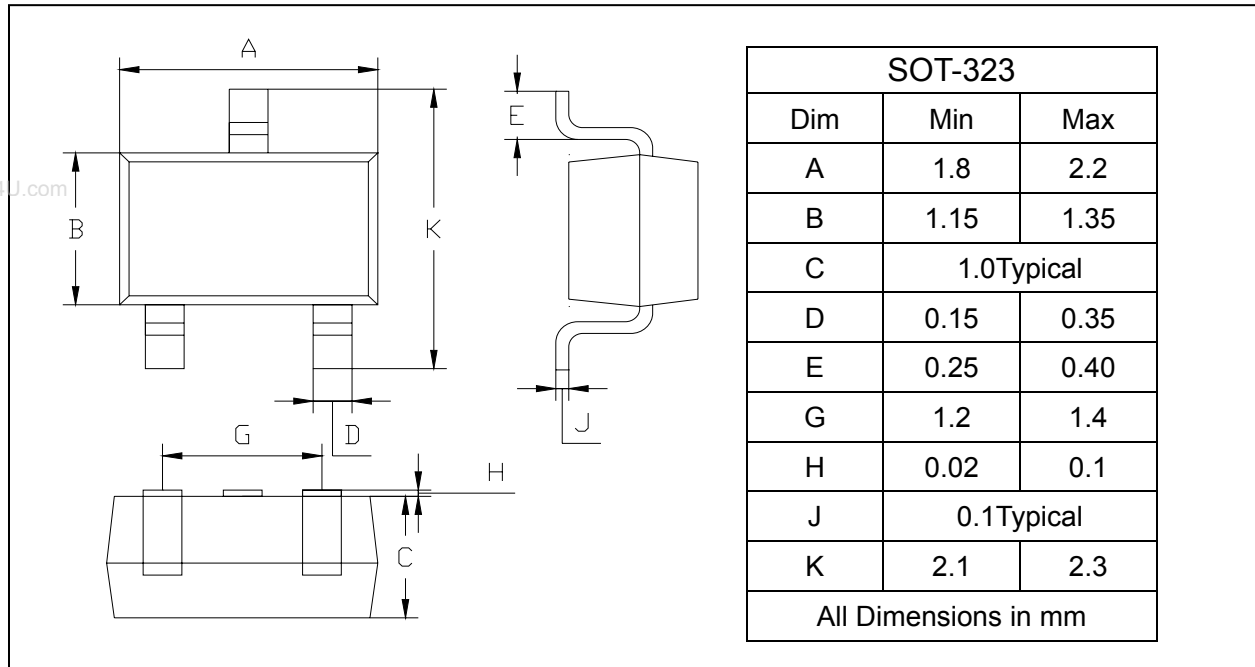
## Silicon Epitaxial Planar Transistor

## 2SC4081W

### PACKAGE OUTLINE

Plastic surface mounted package

SOT-323



### PACKAGE INFORMATION

Device	Package	Shipping
2SC4081W	SOT-323	3000/Tape&Reel