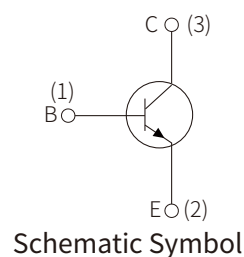


FEATURES

- Power Dissipation of 200mW
- High Stability and High Reliability

MECHANICAL DATA

- SOT-323 small outline plastic package
- Epoxy UL: 94V-0
- Mounting position: Any



APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	75	V
Collector-Emitter Voltage	V_{CEO}	40	
Emitter-Base Voltage	V_{EBO}	6	
Collector Current-Continuous	I_C	0.6	A
Collector Power Dissipation	P_C	200	mW
Thermal Resistance Junction To Ambient	$R_{\theta JA}$	625	$^{\circ}\text{C}/\text{W}$
Junction Temperature	T_J	-55~+150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55~+150	$^{\circ}\text{C}$

Note: 1. Device mounted on an FR4 Printed-Circuit Board (PCB) single-side copper, tin-plated and standard footprint

ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$)

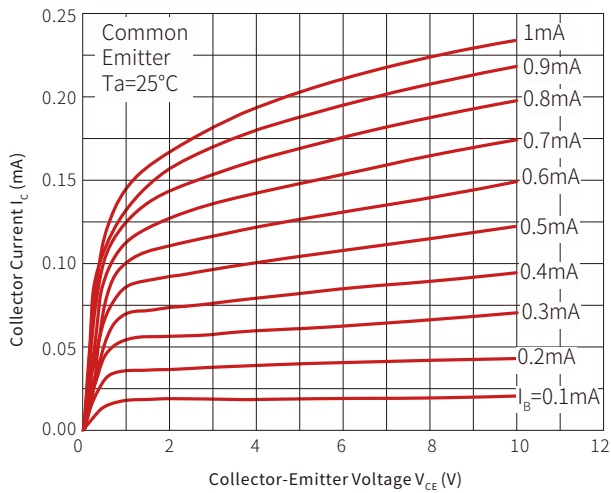
Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0$	75			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10\text{mA}, I_B=0$	30			
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}, I_C=0$	6			
Collector cut-off current	I_{CEX}	$V_{CE}=30\text{V}, V_{EB}=3\text{V}$			10	nA
Collector cut-off current	I_{CBO}	$V_{CB}=60\text{V}, I_E=0$			10	
Emitter cut-off current	I_{EBO}	$V_{EB}=3\text{V}, I_C=0$			100	
DC current gain	$h_{FE(1)}$	$V_{CE}=10\text{V}, I_C=150\text{mA}$	100		300	V
	$h_{FE(2)}$	$V_{CE}=10\text{V}, I_C=500\text{mA}$	42			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500\text{mA}, I_B=50\text{mA}$			1.00	
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=500\text{mA}, I_B=50\text{mA}$			2.00	
Transition frequency	f_T	$V_{CE}=-20\text{V}, I_C=20\text{mA}, f=100\text{MHz}$	300			MHz

CLASSIFICATION OF $h_{FE(1)}$

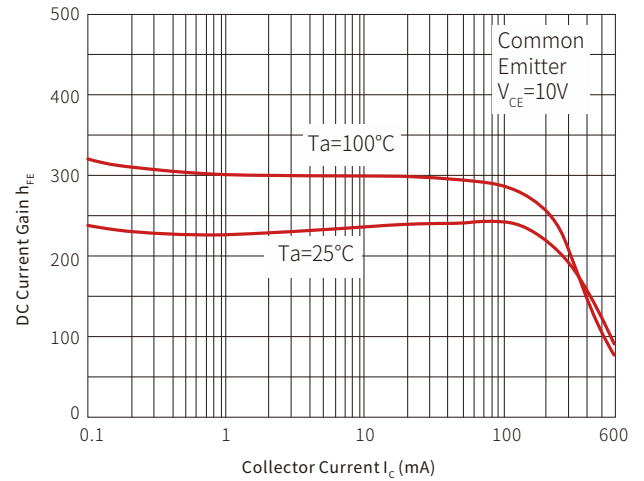
Rank	L	H
Range	100-200	200-300

TYPICAL CHARACTERISTICS

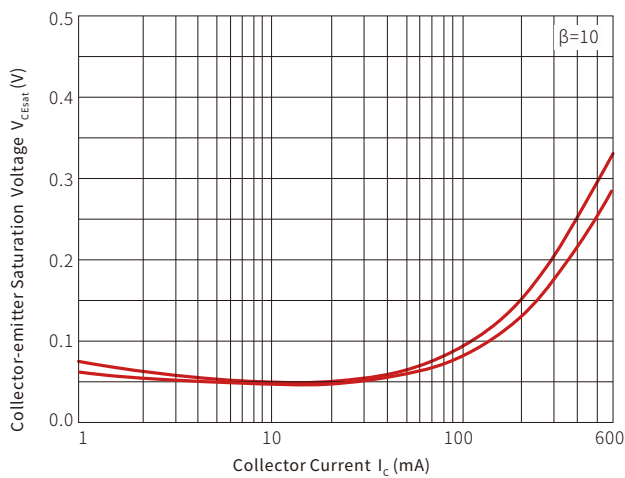
Static Characteristic



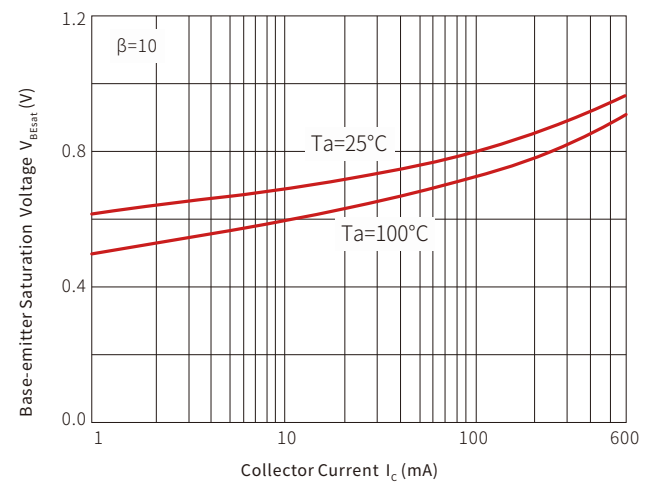
h_{FE} — I_C

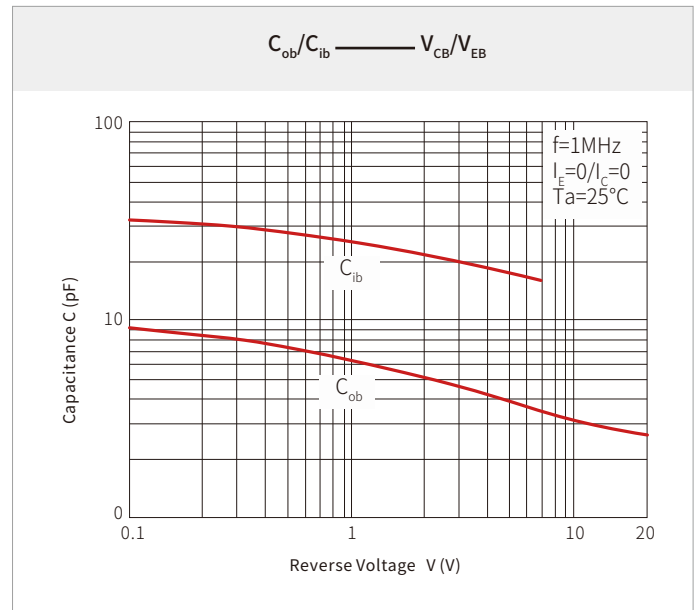
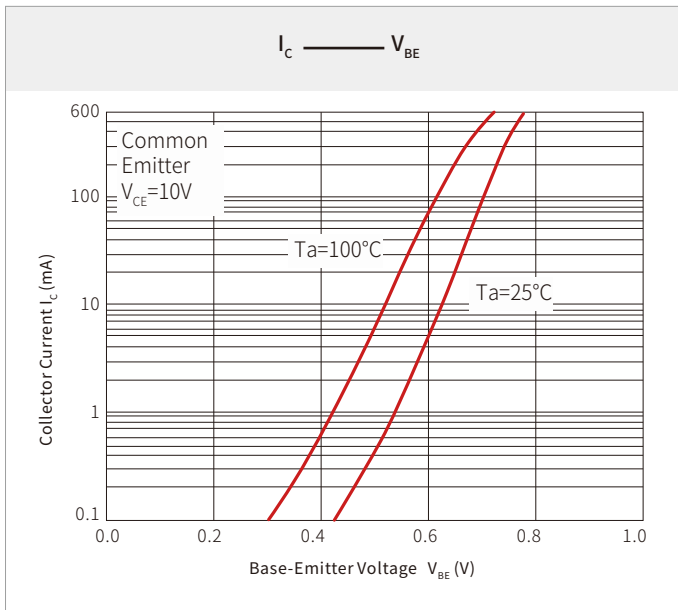


$V_{CE\ sat}$ — I_C



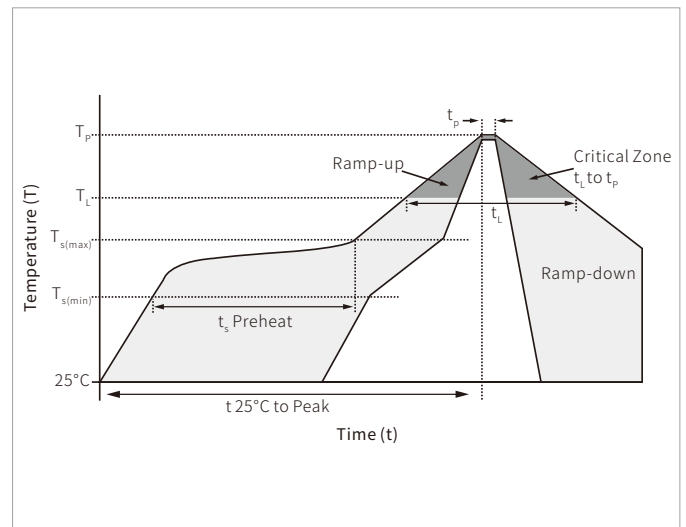
$V_{BE\ sat}$ — I_C



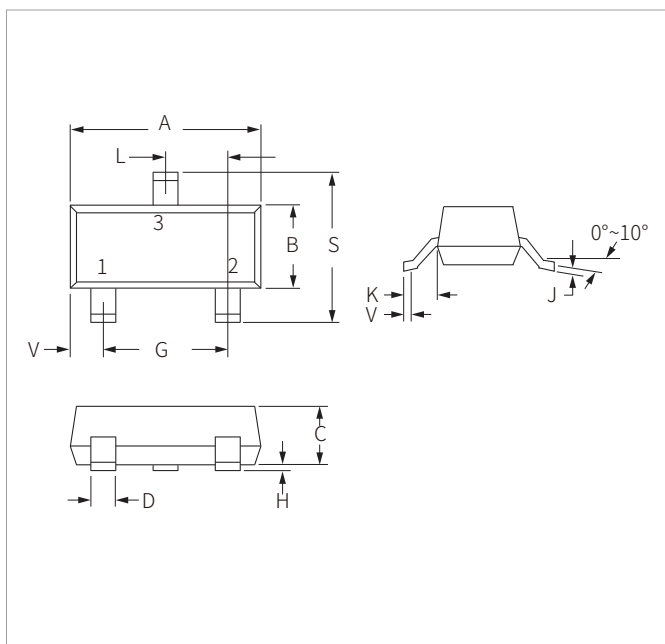


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/second max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_L)	60 – 150 seconds
Peak Temperature (T_p)		260°C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes max.
Do not exceed		260°C

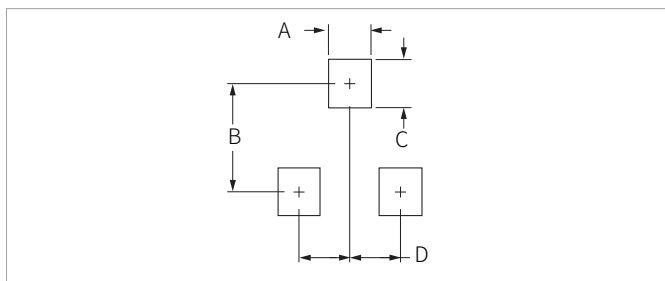


SOT-323 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.00	2.20	0.079	0.087
B	1.15	1.35	0.045	0.053
C	0.80	1.10	0.031	0.043
D	0.20	0.40	0.008	0.016
G	1.20	1.40	0.047	0.055
H	0.00	0.10	0.000	0.004
J	0.08	0.15	0.003	0.006
K	0.525REF		0.021REF	
L	0.650TYP		0.026TYP	
S	2.15	2.45	0.085	0.096
V	0.26	0.46	0.010	0.018

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters	Inches
	NOR	NOR
A	0.50	0.020
B	2.20	0.087
C	0.80	0.031
D	1.30	0.051

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
MMST2222A	SOT-323	3000PCS	7"

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By QR Code

Website



Wechat

To find your local partner within Semiware's global website: www.semiware.com

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