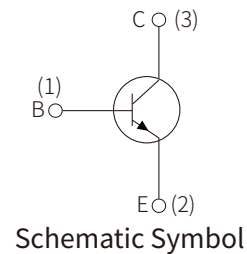
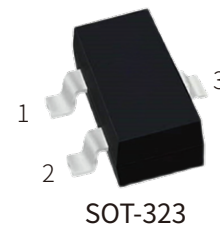


FEATURES

- | Complementary to MMST5401
- | 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°C)

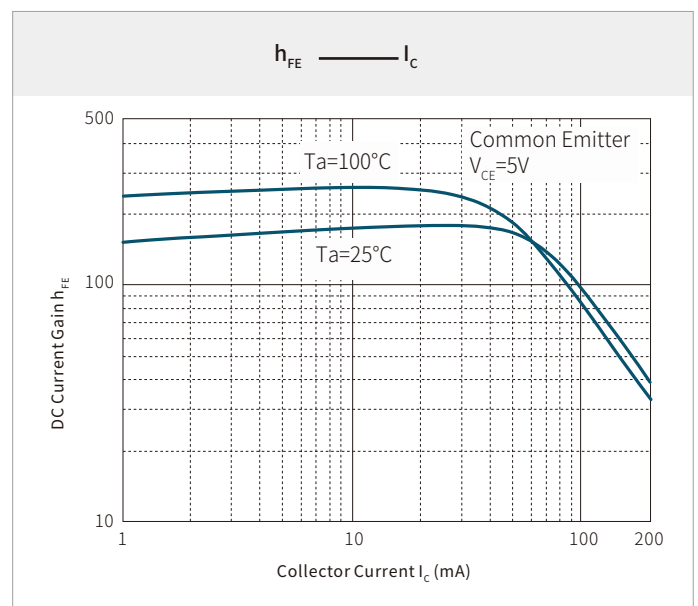
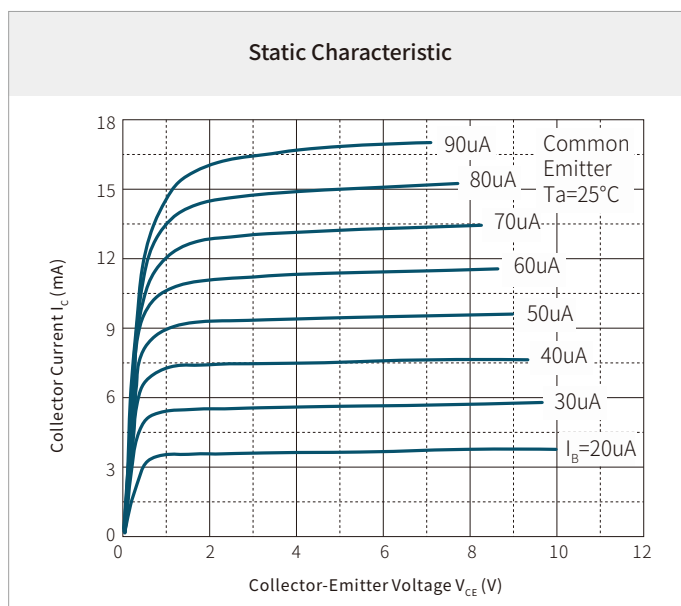
Parameter	Symbol	Value	Unit
Collector-Base Voltage	V _{CBO}	180	V
Collector-Emitter Voltage	V _{CEO}	160	
Emitter-Base Voltage	V _{EBO}	6	
Collector Current-Continuous	I _C	600	mA
Collector Power Dissipation	P _C	200	mW
Thermal resistance From junction to ambient	R _{θJA}	625	°C/W
Junction Temperature	T _J	150	°C
Storage Temperature	T _{STG}	-55~+150	°C

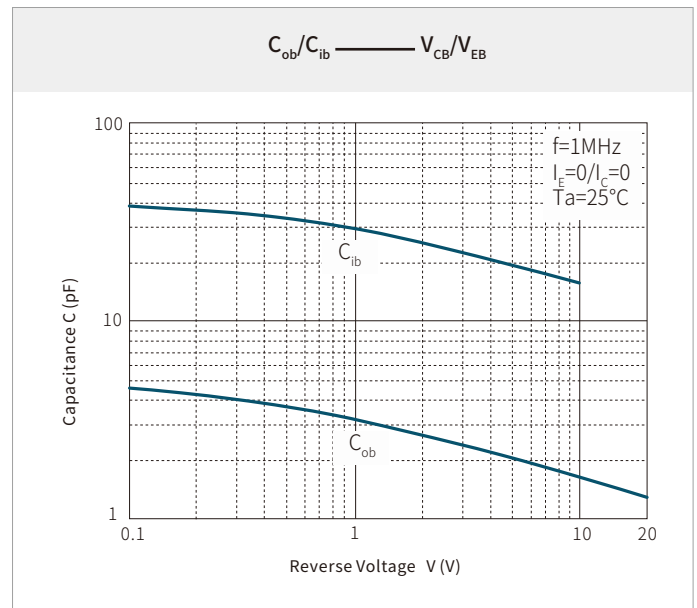
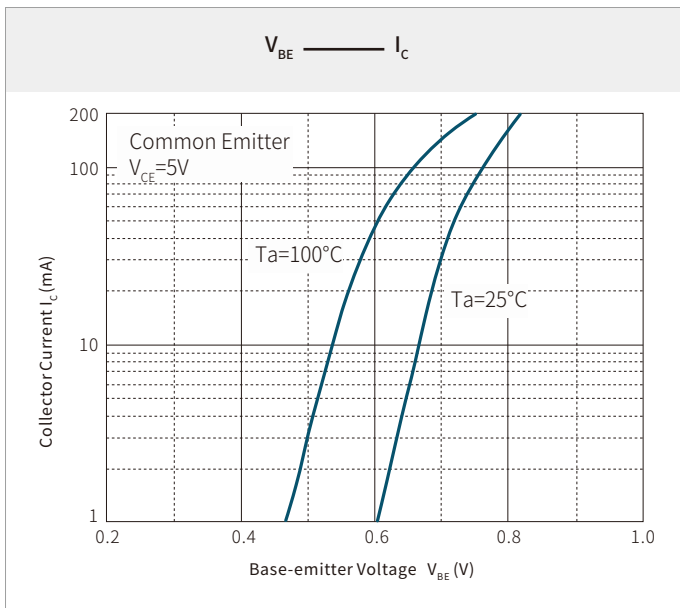
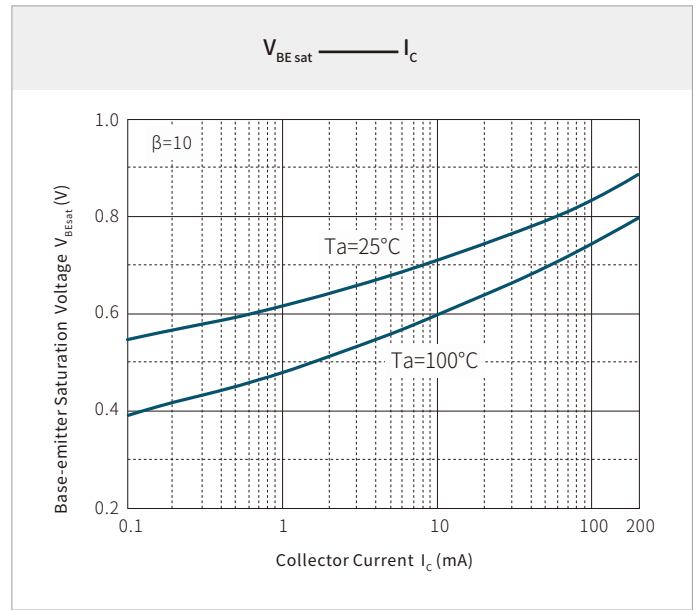
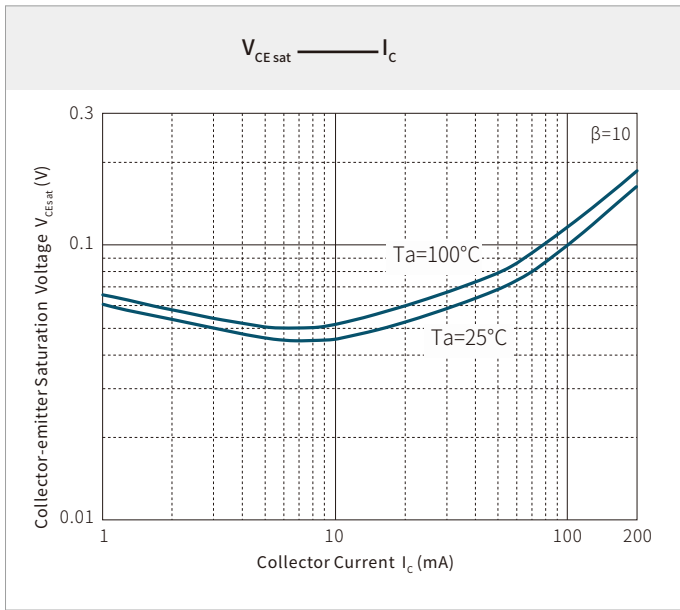
ELECTRICAL CHARACTERISTICS (T_A=25°C)

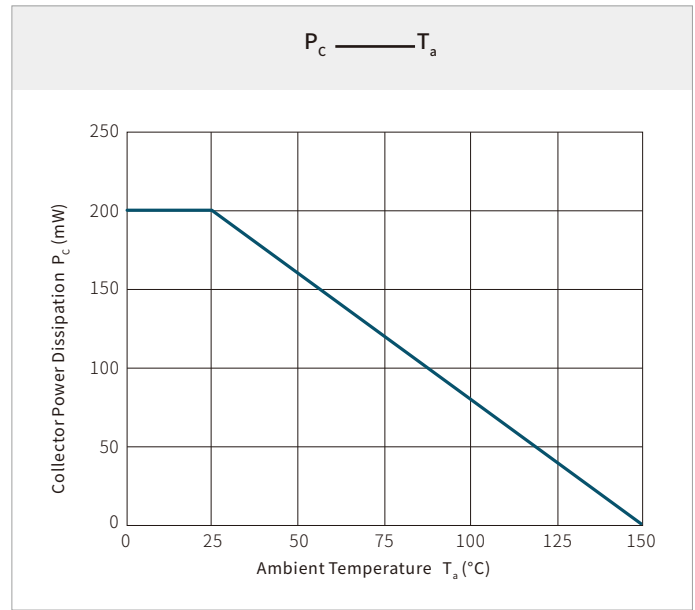
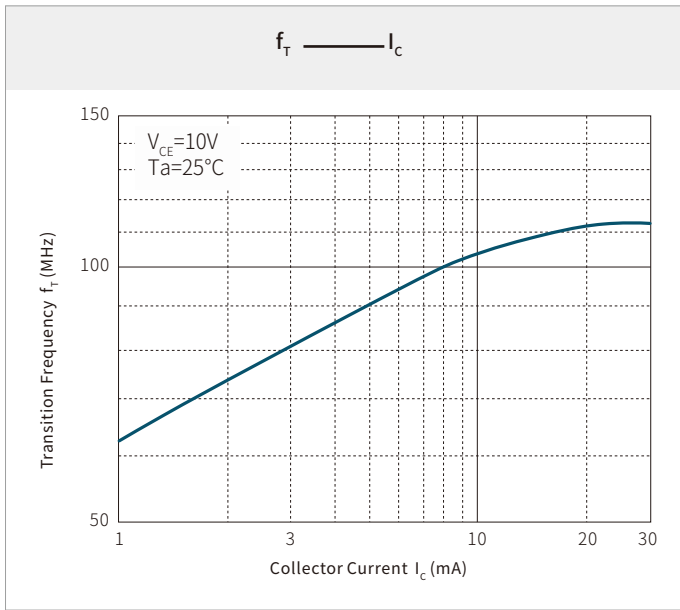
Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =100μA, I _E =0	180			V
Collector-emitter breakdown voltage	V _{(BR)CEO} *	I _C =1mA, I _B =0	160			
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =10μA, I _C =0	6			
Collector cut-off current	I _{CBO}	V _{CB} =120V, I _E =0			50	nA
Emitter cut-off current	I _{EBO}	V _{EB} =4V, I _C =0			50	
DC current gain	h _{FE(1)} *	V _{CE} =5V, I _C =1mA	80			
	h _{FE(2)} *	V _{CE} =5V, I _C =10mA	100		300	
	h _{FE(3)} *	V _{CE} =5V, I _C =50mA	30			
Collector-emitter saturation voltage	V _{CE(sat)1} *	I _C =10mA, I _B =1mA			0.15	V
	V _{CE(sat)2} *	I _C =50mA, I _B =5mA			0.20	
Base-emitter saturation voltage	V _{BE(sat)1} *	I _C =10mA, I _B =1mA			1.00	
	V _{BE(sat)2} *	I _C =50mA, I _B =5mA			1.00	
Transition frequency	f _T	V _{CE} =10V, I _C =10mA, f=100MHz	100		300	MHz
Collector output capacitance	C _{ob}	V _{CB} =10V, I _E =0, f=1MHz			6	pF

*Pulse test: pulse width ≤ 300μs, duty cycle ≤ 2.0%.

TYPICAL CHARACTERISTICS

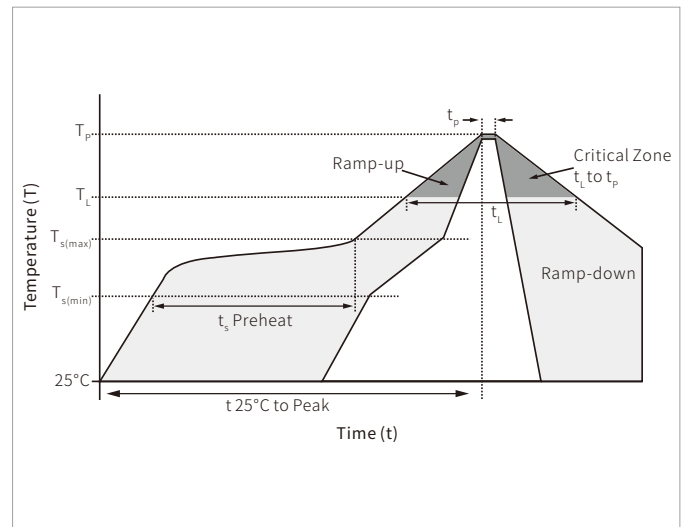




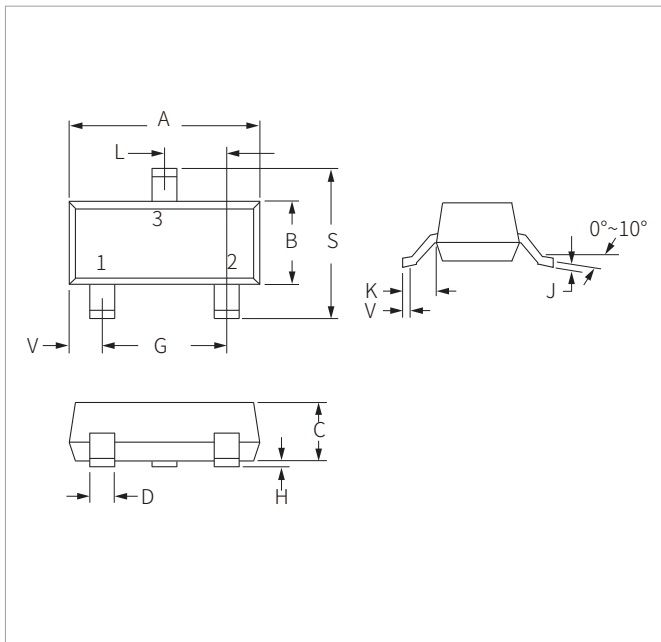


SOLDERING PARAMETERS

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

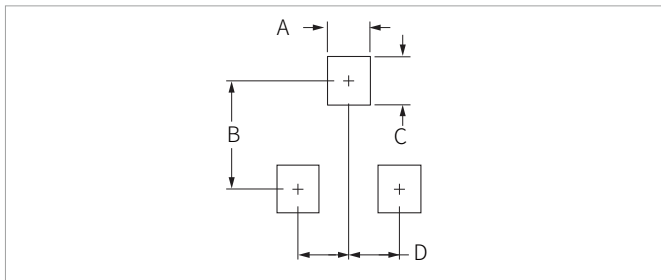


SOT-323 PACKAGE INFORMATION



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
MMST5551	SOT-323	3000PCS	7"

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