

# MSKSEMI 美森科

SEMICONDUCTOR



ESD



TVS



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PLED

## MMST5551

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Product specification

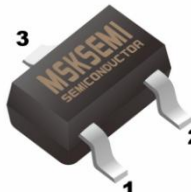

## FEATURES

Complementary to MMST5401

Small Surface Mount Package

Ideal for Medium Power Amplification and Switching

## Reference News

PACKAGE OUTLINE	MARKING
 <div style="border: 1px solid black; padding: 5px; margin-left: 10px;">                     1. BASE                      2. EMITTER                      3. COLLECTOR                 </div> <p style="text-align: center;">SOT-323</p>	

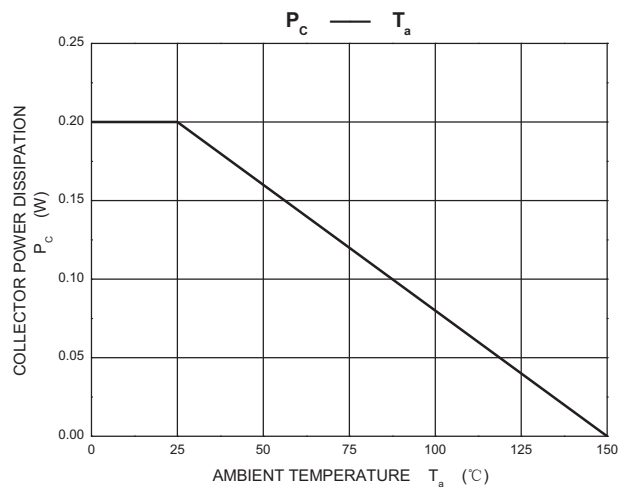
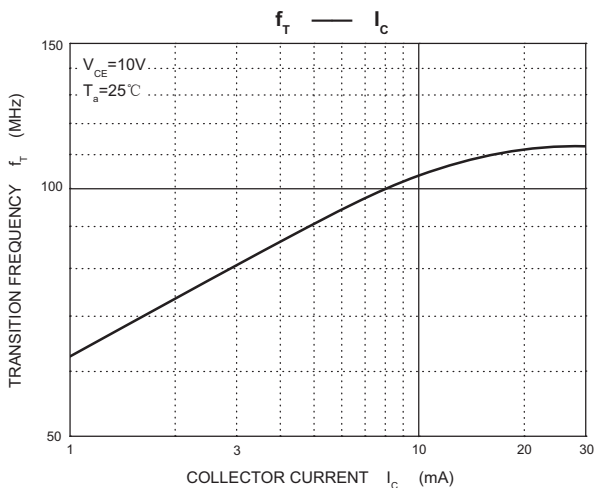
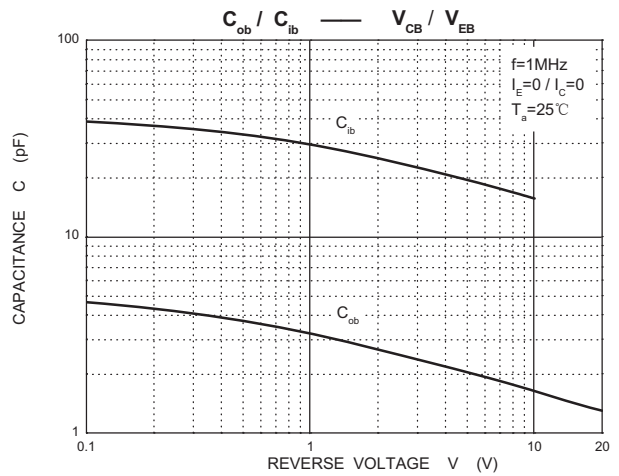
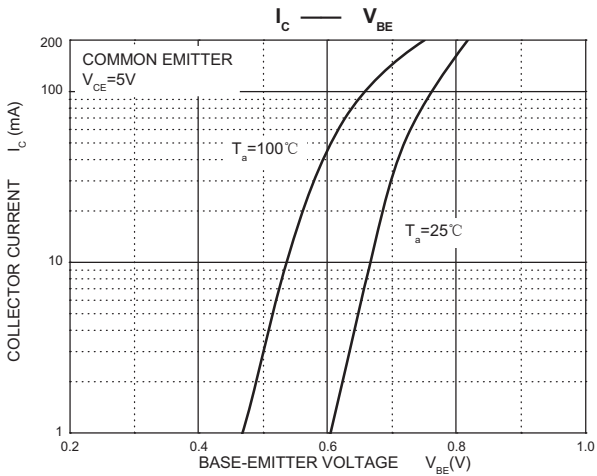
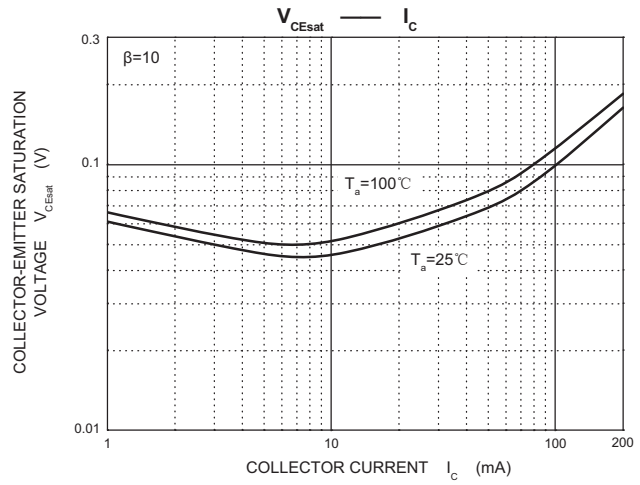
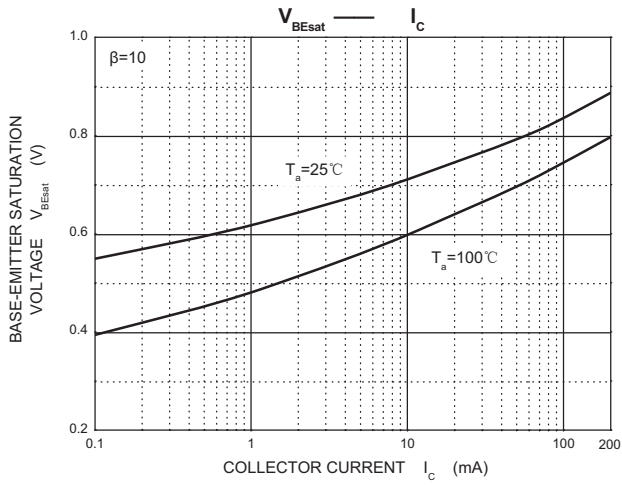
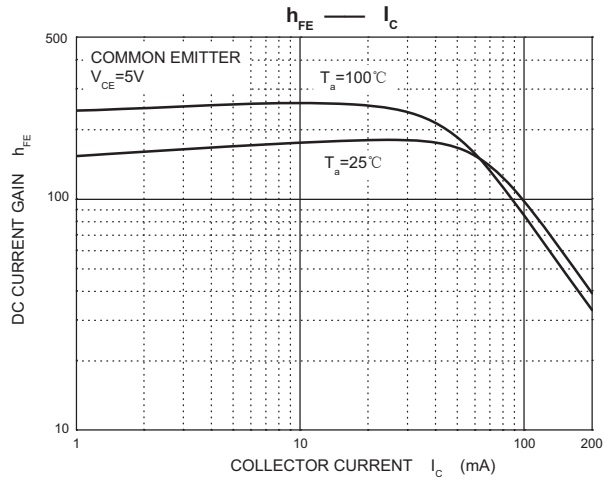
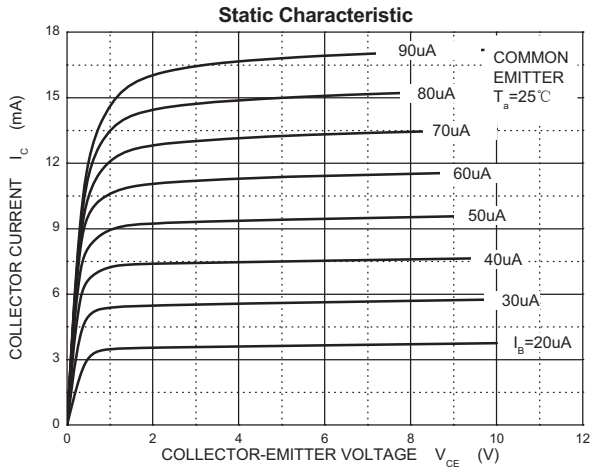
## MAXIMUM RATINGS (Ta=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V <sub>CB0</sub>	Collector-Base Voltage	180	V
V <sub>CEO</sub>	Collector-Emitter Voltage	160	V
V <sub>EBO</sub>	Emitter-Base Voltage	6	V
I <sub>c</sub>	Collector Current	600	mA
P <sub>c</sub>	Collector Power Dissipation	200	mW
R <sub>θJA</sub>	Thermal Resistance From Junction To Ambient	625	°C/W
T <sub>J</sub> , T <sub>stg</sub>	Operation Junction and Storage Temperature Range	-55 ~ +150	°C

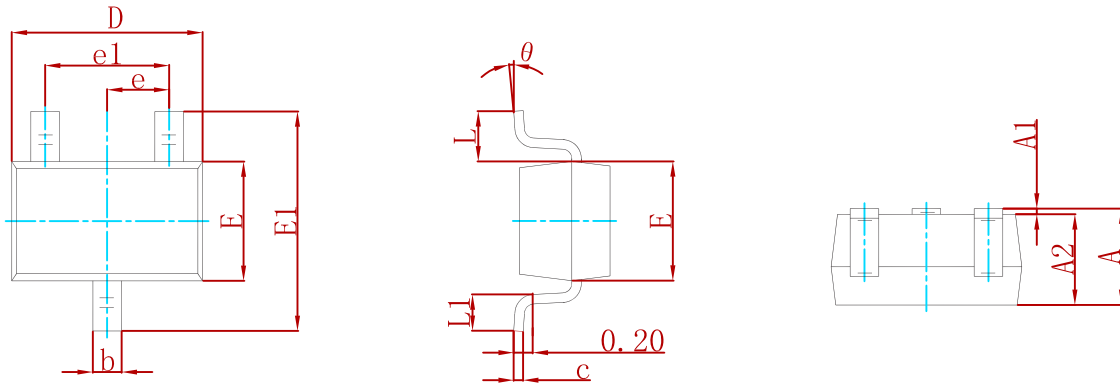
## ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>c</sub> =100μA, I <sub>E</sub> =0	180			V
Collector-emitter breakdown voltage	V <sub>(BR)CEO*</sub>	I <sub>c</sub> =1mA, I <sub>B</sub> =0	160			V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =10μA, I <sub>C</sub> =0	6			V
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> =120V, I <sub>E</sub> =0			50	nA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> =4V, I <sub>C</sub> =0			50	nA
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =1mA	80			
		V <sub>CE</sub> =5V, I <sub>C</sub> =10mA	100		300	
		V <sub>CE</sub> =5V, I <sub>C</sub> =50mA	30			
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =50mA, I <sub>B</sub> =5mA			0.2	V
		I <sub>C</sub> =10mA, I <sub>B</sub> =1mA			0.15	V
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =50mA, I <sub>B</sub> =5mA			1	V
		I <sub>C</sub> =10mA, I <sub>B</sub> =1mA			1	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =10mA, f=100MHz	100		300	MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1MHz			6	pF

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

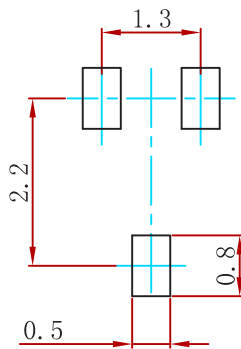


**PACKAGE MECHANICAL DATA**



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

**Suggested Pad Layout**



- Note:
1. Controlling dimension: in millimeters.
  2. General tolerance: ±0.05mm.
  3. The pad layout is for reference purposes only.

**REEL SPECIFICATION**

P/N	PKG	QTY
MMST5551	SOT-323	3000

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