

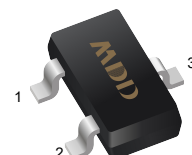
SOT-323 Plastic-Encapsulate Transistors

MMST5551 TRANSISTOR (NPN)

FEATURES

- Complementary to MMST5401
- High Stability and High Reliability

SOT-323



1. BASE
2. EMITTER
3. COLLECTOR

Marking: K4N

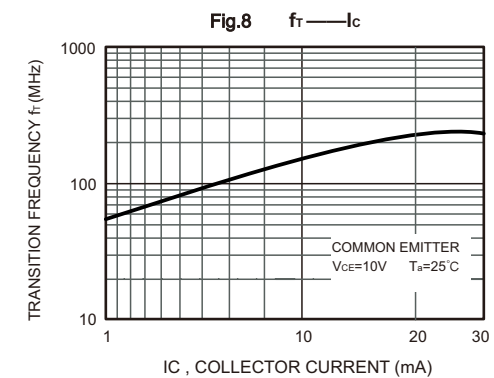
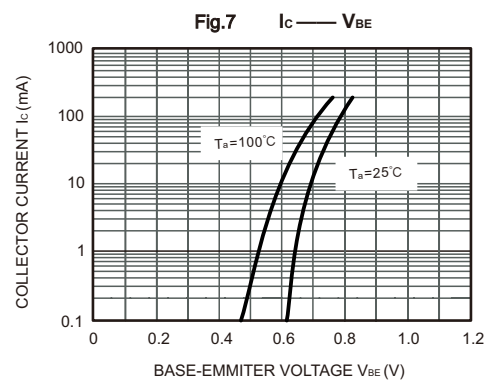
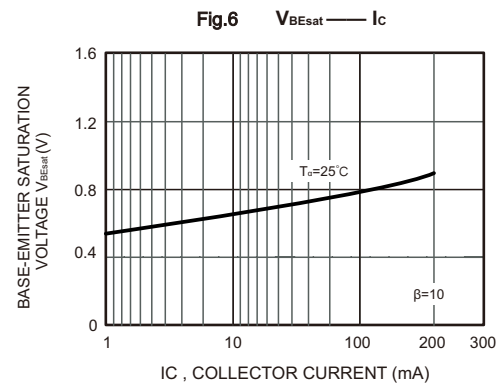
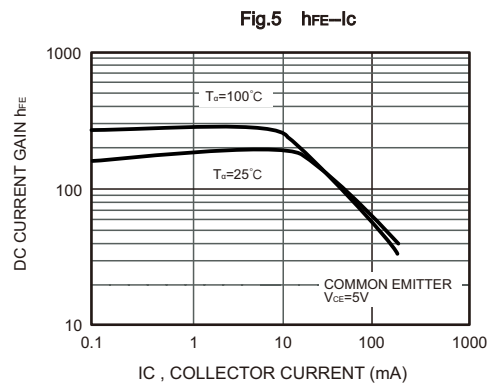
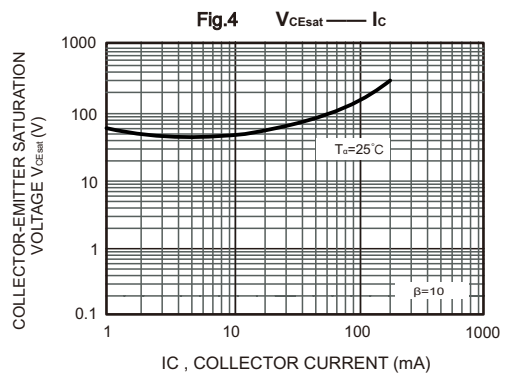
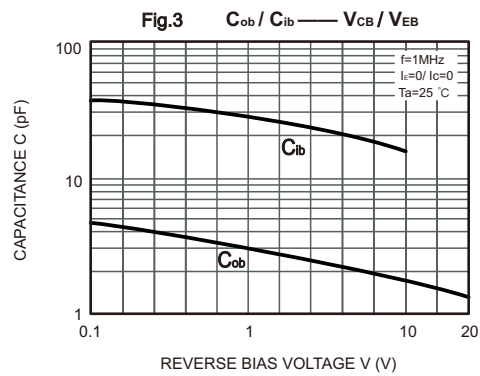
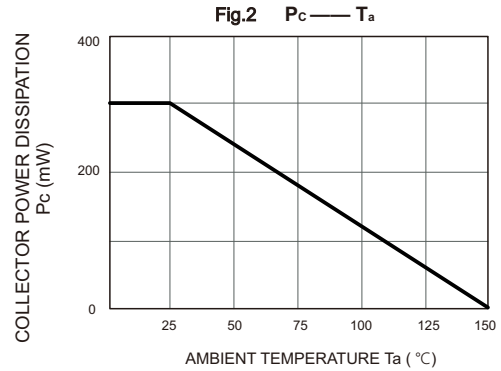
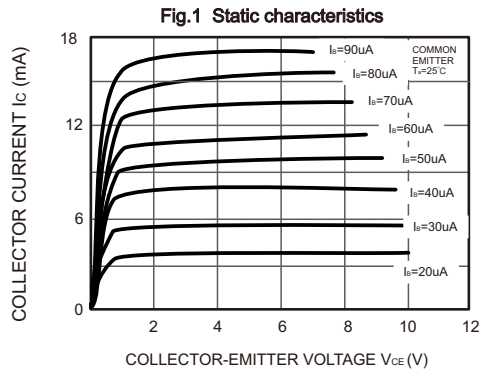
MAXIMUM RATINGS (Ta =25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector– Base Voltage	V_{CB0}	180	V
Collector– Emitter Voltage	V_{CEO}	160	V
Emitter– Base Voltage	V_{EBO}	6	V
Collector Current — Continuous	I_C	0.6	A
Collector Power Dissipation	P_C	0.2	W
Thermal Resistance From Junction to Ambient	R_{thJA}	625	°C/W
Operation Junction and Storage Temperature Range	T_J, T_{stg}	-55~ +150	°C

ELECTRICAL CHARACTERISTICS (TA = 25°C unless otherwise noted.)

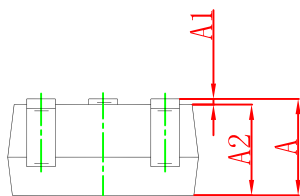
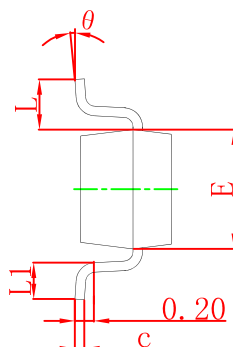
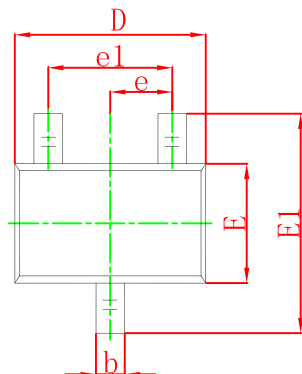
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 100\mu A, I_E = 0$	180			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 1mA, I_B = 0$	160			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 10\mu A, I_C = 0$	6			V
Collector cut-off current	I_{CBO}	$V_{CB} = 120V, I_E = 0$			50	nA
Emitter cut-off current	I_{EBO}	$V_{EB} = 4V, I_C = 0$			50	nA
DC current gain	$h_{FE(1)}$	$V_{CE} = 5V, I_C = 1mA$	80			
	$h_{FE(2)}$	$V_{CE} = 5V, I_C = 10mA$	100		300	
	$h_{FE(3)}$	$V_{CE} = 5V, I_C = 50mA$	50			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 10mA, I_B = 1mA$			0.15	V
		$I_C = 50mA, I_B = 5mA$			0.2	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 10mA, I_B = 1mA$			1	V
		$I_C = 50mA, I_B = 5mA$			1	V
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

Typical Characteristics



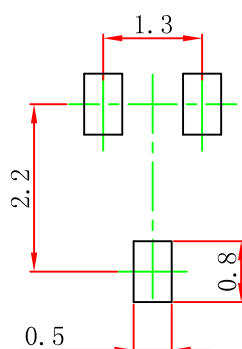
Outline Drawing

SOT-323 Package Outline Dimensions



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: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.