

MSKSEMI 美森科

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

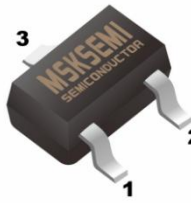

MMST2222A

Product specification

FEATURES

- Epitaxial planar die construction
- Complementary PNP Type available(MMST2907A)

Reference News

PACKAGE OUTLINE	MARKING
 <div> 1. BASE 2. EMITTER 3. COLLECTOR </div>	
SOT-323	

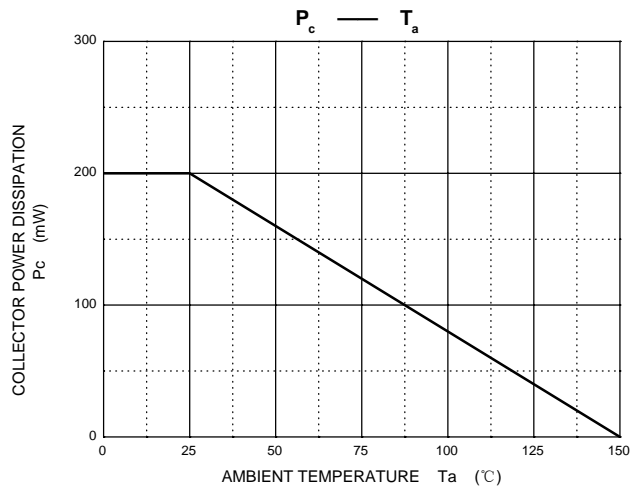
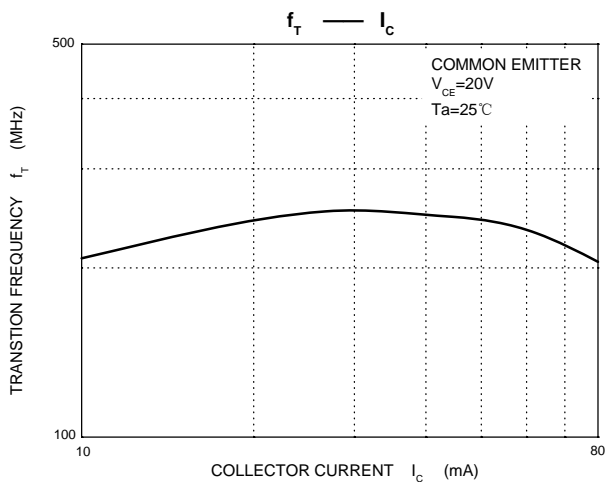
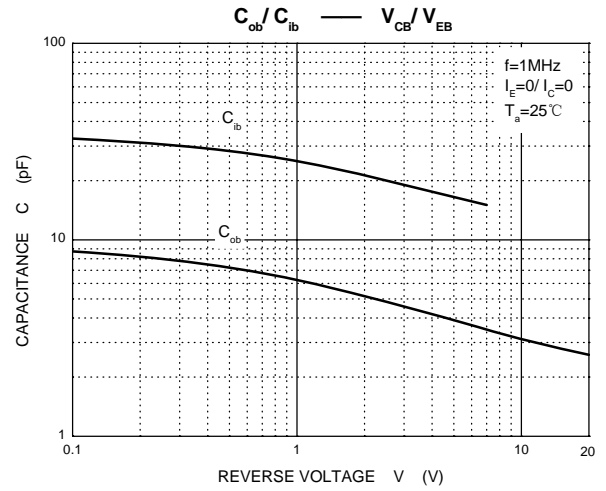
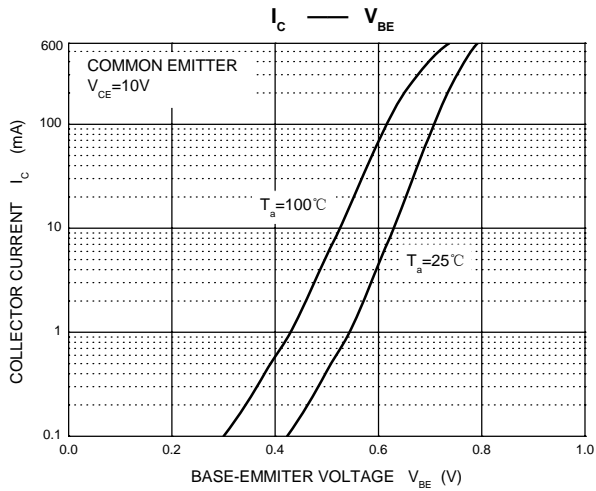
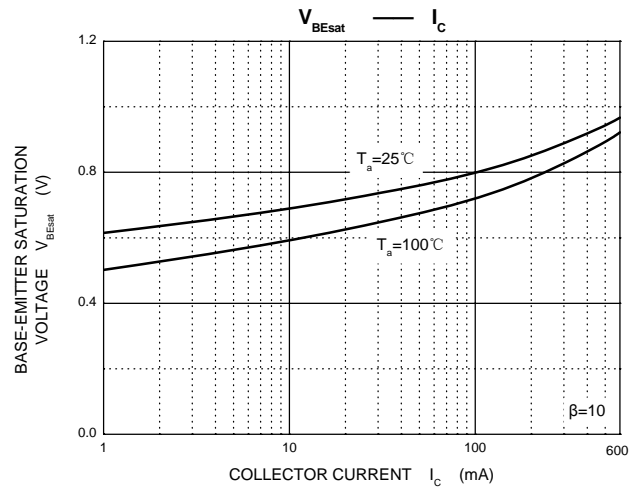
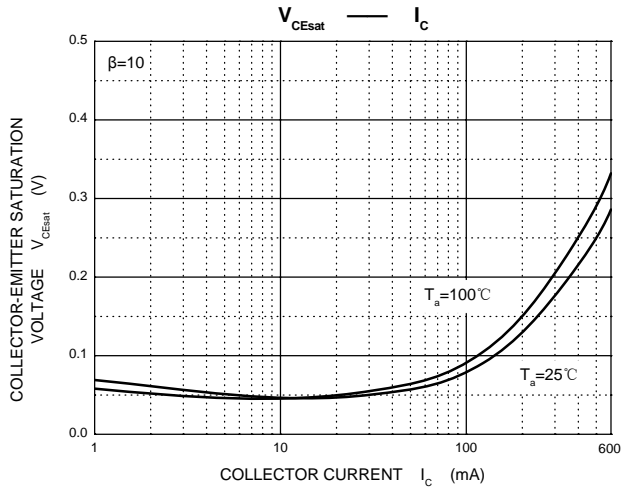
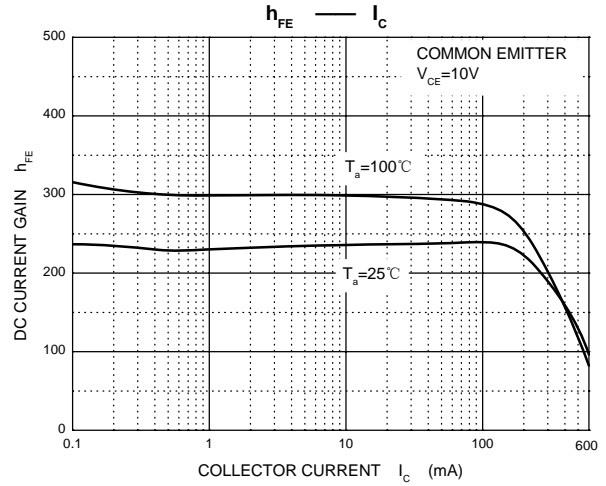
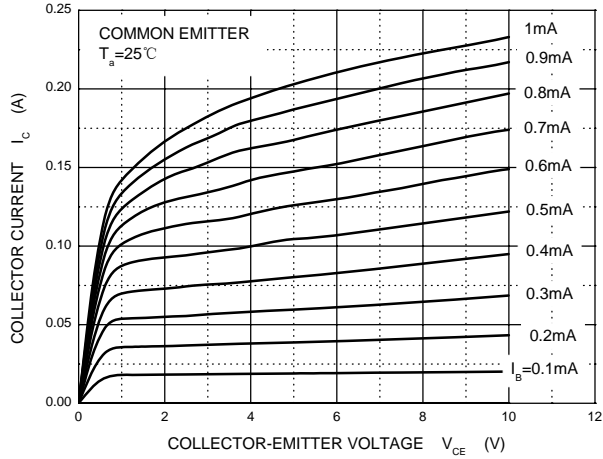
MAXIMUM RATINGS (Ta=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	75	V
V_{CEO}	Collector-Emitter Voltage	40	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	600	mA
P_C	Collector Dissipation	200	mW
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	℃

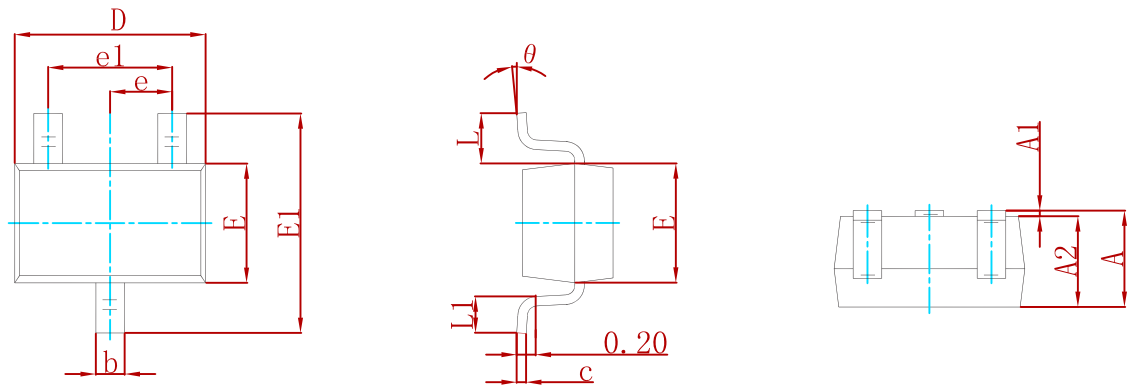
ELECTRICAL CHARACTERISTICS (Ta=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 10\mu A, I_E = 0$	75			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 10mA, I_B = 0$	40			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 10\mu A, I_C = 0$	6			V
Collector cut-off current	I_{CBO}	$V_{CB} = 70V, I_E = 0$			100	nA
Collector cut-off current	I_{CEO}	$V_{CE} = 35V, I_B = 0$			100	nA
Emitter cut-off current	I_{EBO}	$V_{EB} = 3V, I_C = 0$			100	nA
DC current gain	$h_{FE(1)}$	$V_{CE} = 10V, I_C = 0.1mA$	35			
	$h_{FE(2)}$	$V_{CE} = 10V, I_C = 1mA$	50			
	$h_{FE(3)}$	$V_{CE} = 10V, I_C = 10mA$	75			
	$h_{FE(4)}$	$V_{CE} = 10V, I_C = 150mA$	100		300	
	$h_{FE(5)}$	$V_{CE} = 10V, I_C = 500mA$	40			
	$h_{FE(6)}$	$V_{CE} = 1V, I_C = 150mA$	35			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500mA, I_B = 50mA$ $I_C = 150mA, I_B = 15mA$			1 0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 500mA, I_B = 50mA$ $I_C = 150mA, I_B = 15mA$			2.0 1.2	V
Transition frequency	f_T	$V_{CE} = 20V, I_C = 20mA$ $f = 100MHz$	300			MHz
Output Capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0, f = 1MHz$			8	pF
Delay time	t_d	$V_{CC} = 30V, V_{BE(off)} = -0.5V$			10	ns
Rise time	t_r	$I_C = 150mA, I_B = 15mA$			25	ns
Storage time	t_s	$V_{CC} = 30V, I_C = 150mA$			225	ns
Fall time	t_f	$I_{B1} = -I_{B2} = 15mA$			60	ns

Static Characteristic

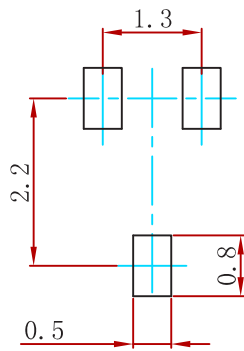


PACKAGE MECHANICAL DATA



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
MMST2222A	SOT-323	3000

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