

MSKSEMI 美森科

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

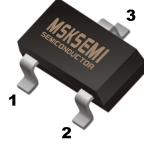

MMBTA28-MS

Product specification

Features

- High Current Gain

Reference News

PACKAGE OUTLINE	MARKING
 <p>1. BASE 2. EMITTER 3. COLLECTOR</p>	
SOT-23	

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

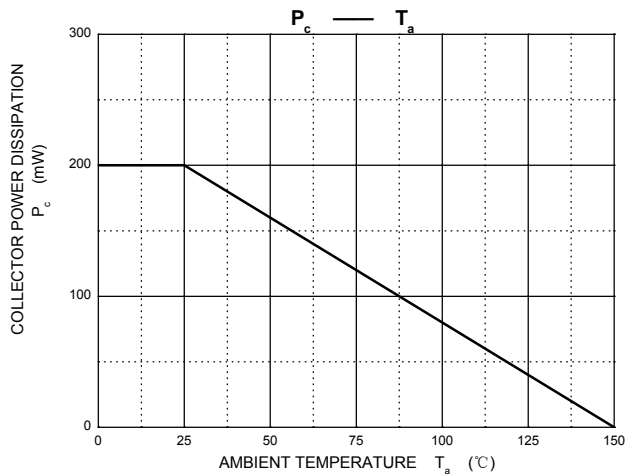
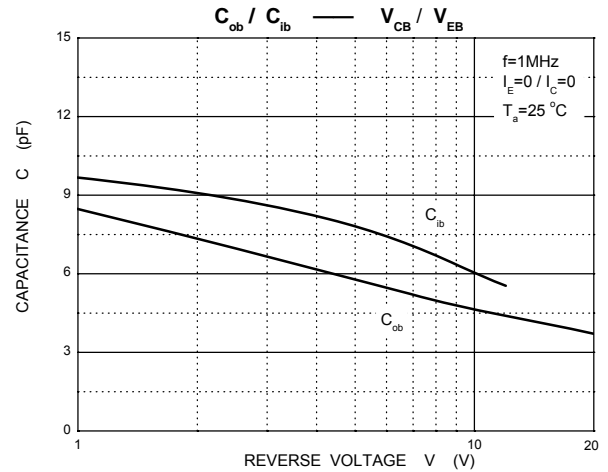
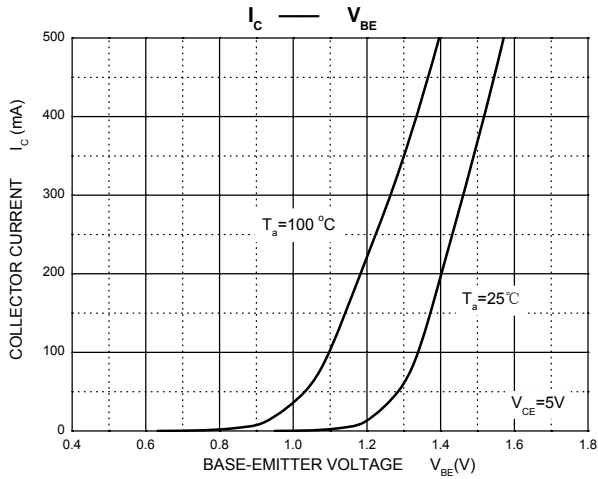
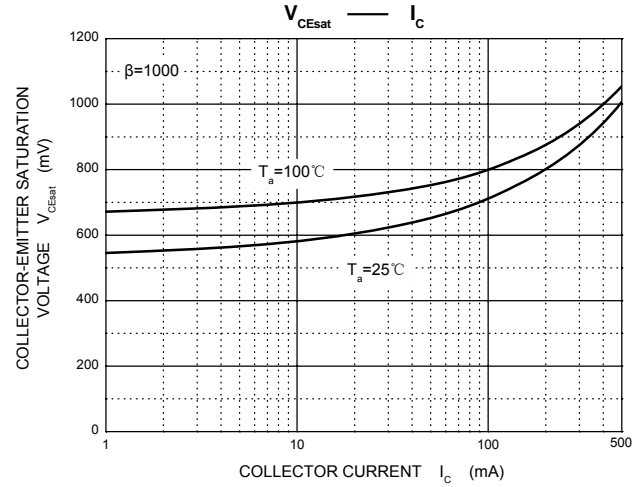
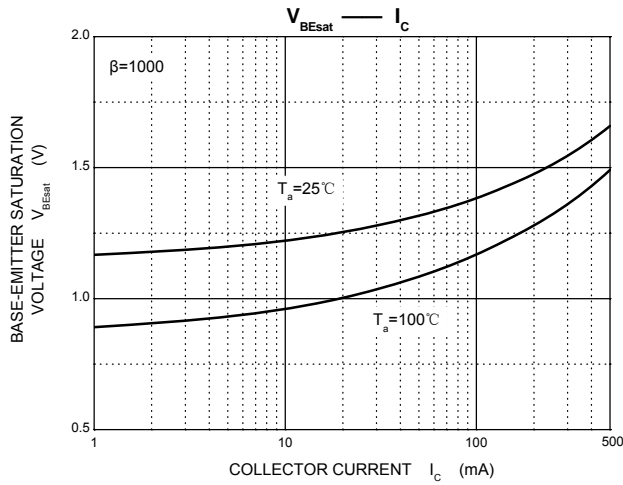
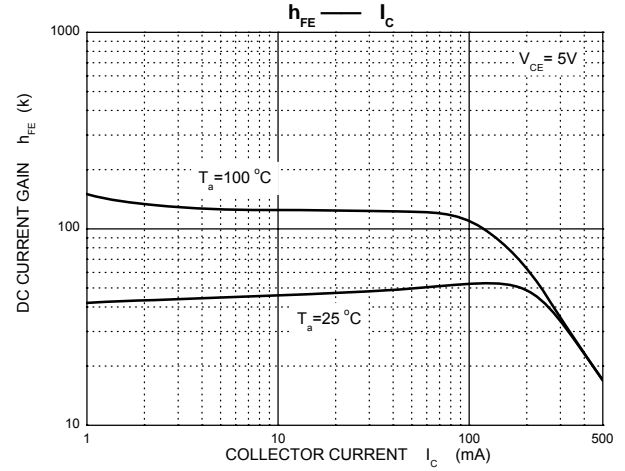
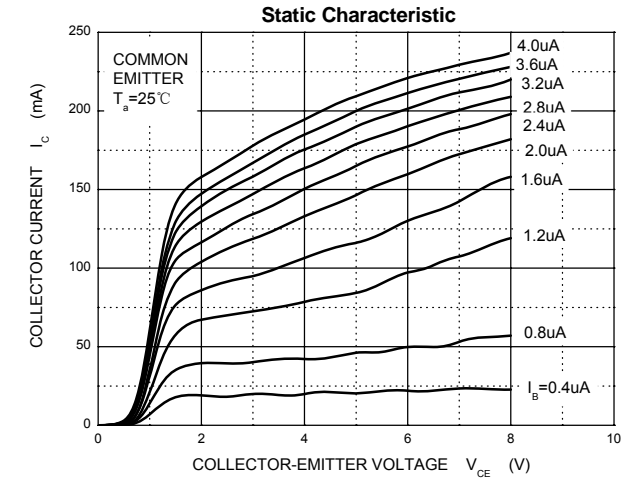
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	12	V
I_C	Collector Current	500	mA
P_C	Collector Power Dissipation	200	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	625	°C/W
T_j	Junction Temperature	150	°C
T_{stg}	Storage Temperature	-55 ~ +150	°C

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

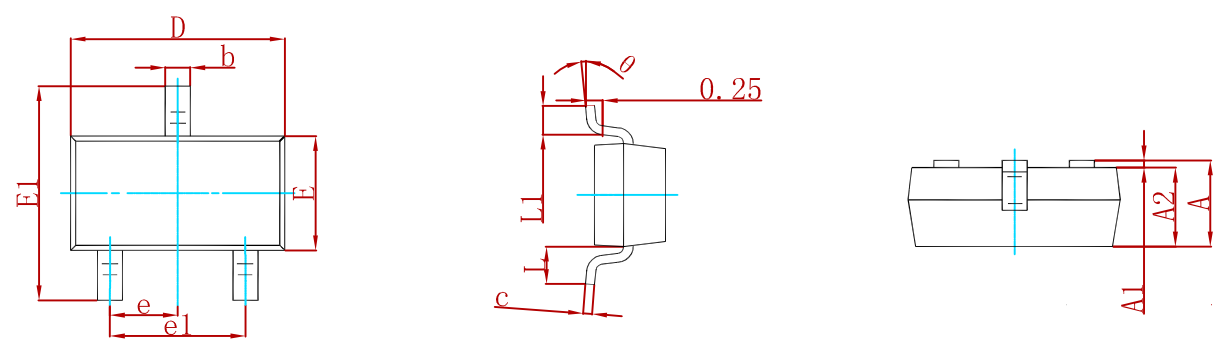
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	80			V
Collector-emitter sustain voltage	$V_{CEO(sus)}$	$I_C=100\mu A, V_{BE}=0$	80			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	12			V
Collector cut-off current	I_{CBO}	$V_{CB}=60V, I_E=0$			0.1	μA
Collector cut-off current	I_{CES}	$V_{CE}=60V, V_{BE}=0$			0.5	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=10V, I_C=0$			0.1	μA
DC current gain	$h_{FE(1)}^*$	$V_{CE}=5V, I_C=10mA$	10			K
	$h_{FE(2)}^*$	$V_{CE}=5V, I_C=100mA$	10			K
Collector-emitter saturation voltage	$V_{CE(sat)1}^*$	$I_C=10mA, I_B=0.01mA$			1.2	V
	$V_{CE(sat)2}^*$	$I_C=100mA, I_B=0.1mA$			1.5	V
Base-emitter voltage	V_{BE}^*	$V_{CE}=5V, I_C=100mA$			2	V
Collector output capacitance	C_{ob}	$V_{CB}=1V, I_E=0, f=1MHz$			8	pF
Transition frequency	f_T	$V_{CE}=5V, I_C=10mA, f=100MHz$	125			MHz

*Pulse test: pulse width $\leq 300\mu s$, duty cycle $\leq 2.0\%$.

Typical Characteristics

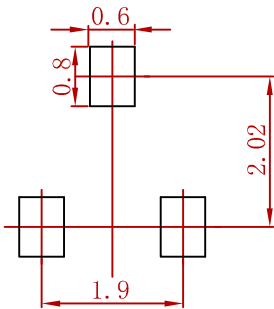


PACKAGE MECHANICAL DATA



Symbol	Dimensions in Millimeters		Dimensions in Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
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.

REEL SPECIFICATION

P/N	PKG	QTY
MMBTA28-MS	SOT-23	3000

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