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MMBT2222AM3T5G-MS

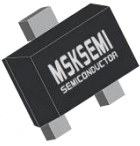

Product specification

General Features

Epitaxial planar die construction

Complementary PNP Type available(MMBT2907AM)

Reference News

PACKAGE OUTLINE	Foot position analysis	Marking
 SOT-723	<ol style="list-style-type: none">1. BASE2.EMITTER3.COLLECTOR	

MAXIMUM RATINGS(Ta = 25°C)

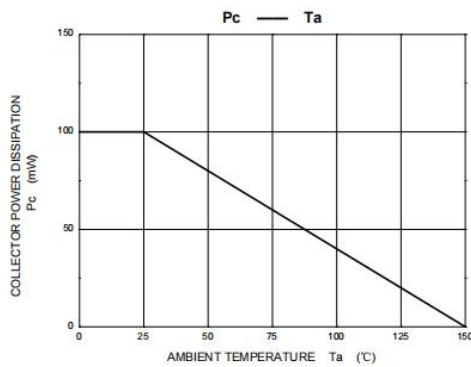
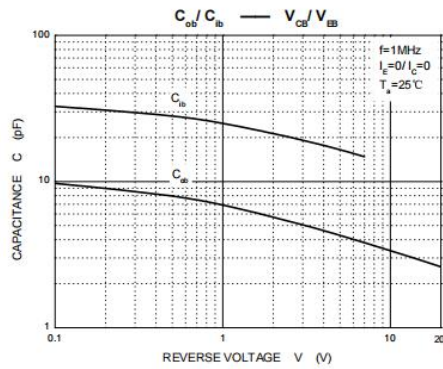
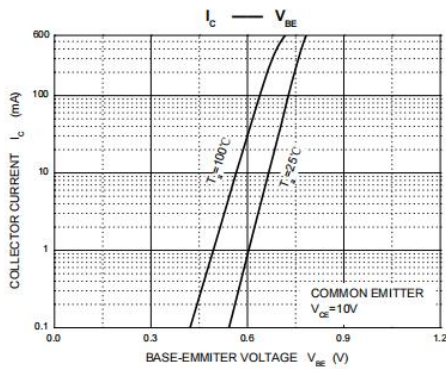
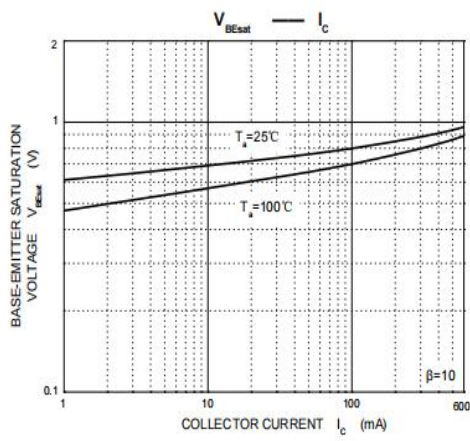
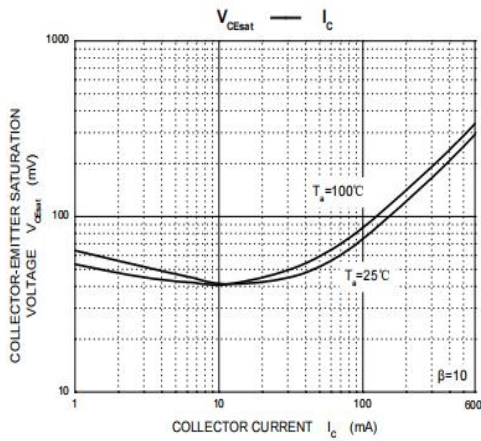
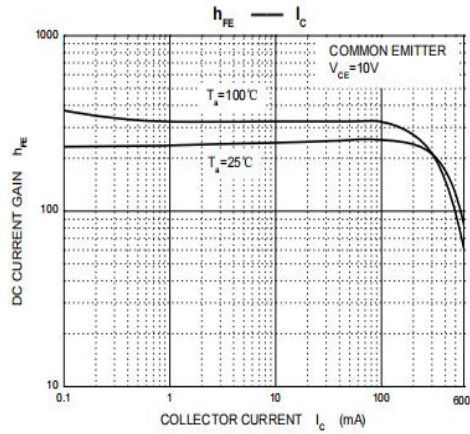
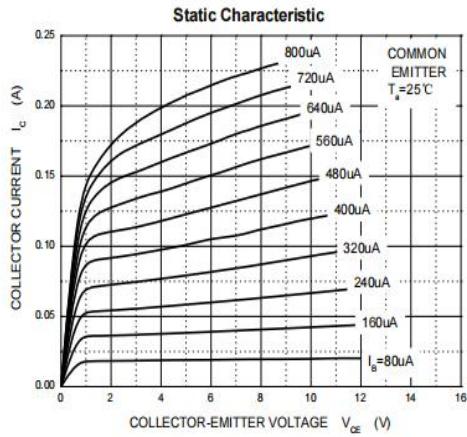
Symbol	Parameter	Value	Unit
V _{CB0}	Collector-Base Voltage	75	V
V _{CEO}	Collector-Emitter Voltage	40	V
V _{EBO}	Emitter-Base Voltage	6	V
I _C	Collector Current -Continuous	0.5	A
P _C	Power Dissipation	100	mW
R _{θJA}	Thermal Resistance from Junction to Ambient	1250	°C/W
T _J	Junction Temperature	150	°C
T _{stg}	storage Temperature	-55~+150	°C

ELECTRICAL CHARACTERISTICS (Ta=25 °C unless otherwise)

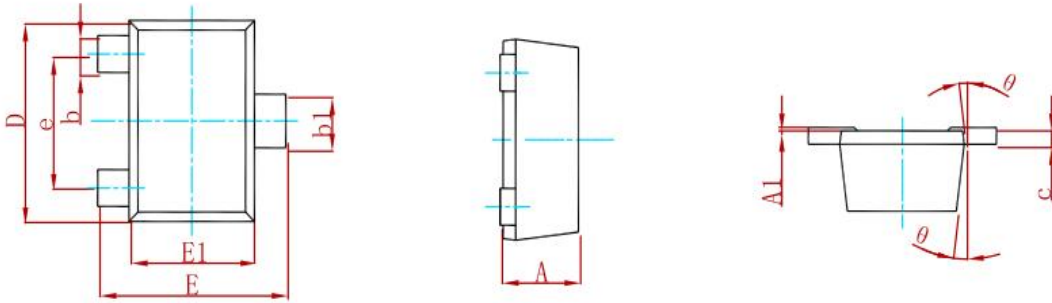
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =10pA, I _E =0	75			V
Collector-emitter breakdown voltage	V _{(BR)CEO} *	I _C =10mA, I _B =0	40			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =10pA, I _C =0	6			V
Collector cut-off current	I _{CB0}	V _{CB} =60V, I _E =0			0.01	p _A
Collector cut-off current	I _{CEx}	V _{CE} =30V, V _{BE(off)} =3V			0.01	p _A
Emitter cut-off current	I _{EBO}	V _{EB} =3V, I _C =0			0.01	p _A
DC current gain	h _{FE} *	V _{CE} =10V, I _C = 150mA	100		300	
		V _{CE} =10V, I _C = 0.1mA	40			
		V _{CE} =10V, I _C = 500mA	42			
Collector-emitter saturation voltage	V _{CE(sat)} *	I _C =500 mA, I _B = 50mA			1	V
		I _C =150 mA, I _B =15mA			0.3	V
Base-emitter saturation voltage	V _{BE(sat)} *	I _C =500 mA, I _B = 50mA			2.0	V
		I _C =150 mA, I _B =15mA			1.2	V
Transition frequency	f _T	V _{CE} =20V, I _C = 20mA, f= 100MHz	300			MHz
Delay time	t _d	V _{CC} =30V, V _{BE(off)} =-0.5V I _C =150mA, I _{B1} = 15mA			10	ns
Rise time	t _r				25	ns
Storage time	t _s	V _{CC} =30V, I _C =150mA I _{B1} =-I _{B2} =15mA			225	ns
Fall time	t _f				60	ns

*pulse test: Pulse Width ≤300ps, Duty Cycle≤ 2.0%.

ELECTRICAL CHARACTERISTICS CURVES

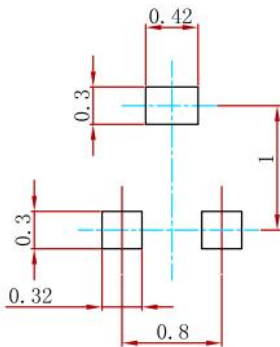


PACKAGE MECHANICAL DATA



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.430	0.500	0.017	0.020
A1	0.000	0.050	0.000	0.002
b	0.170	0.270	0.007	0.011
b1	0.270	0.370	0.011	0.015
c	0.080	0.150	0.003	0.006
D	1.150	1.250	0.045	0.049
E	1.150	1.250	0.045	0.049
E1	0.750	0.850	0.030	0.033
e	0.800TYP		0.031TYP	
theta	7° REF.		7° REF.	

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
MMBT2222AM3T5G-MS	SOT-723	8000

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