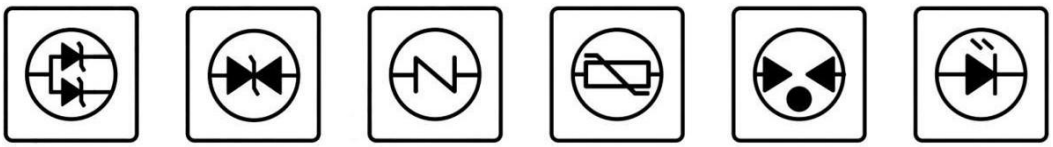
MSKSEMI 美森科
SEMICONDUCTOR



MMBT3906M

Product specification

General Features

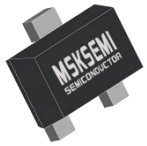
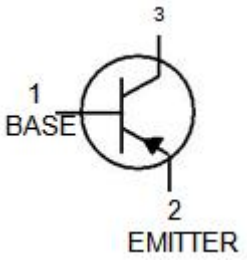
Capable of 100 mWatts of Power Dissipation and 200mA Ic

Operating and Storage Junction Temperatures: -55℃ to 150℃

Small Outline Surface Mount Package

RoHS compliant / Green EMC

Reference News

PACKAGE OUTLINE	Foot position analysis	Marking
 SOT-723		3N

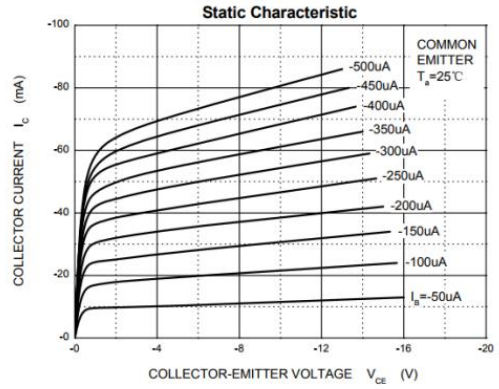
MAXIMUM RATINGS (Ta=25℃ unless otherwise noted)

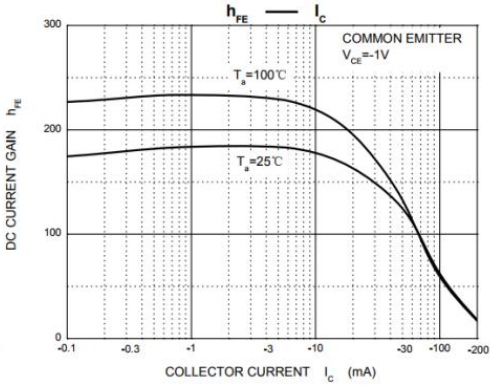
Symbol	Parameter	Value	Unit
VCBO	Collector-Base Voltage	-40	V
VCEO	Collector-Emitter Voltage	-40	V
VEBO	Emitter-Base Voltage	-5	V
IC	Collector Current -Continuous	-0.2	A
PC	Collector Power Dissipation	100	mW
RΘ JA	Thermal Resistance From Junction To Ambient	1250	℃/W
Tj	Junction Temperature	150	℃
Tstg	Storage Temperature	-55~+150	℃

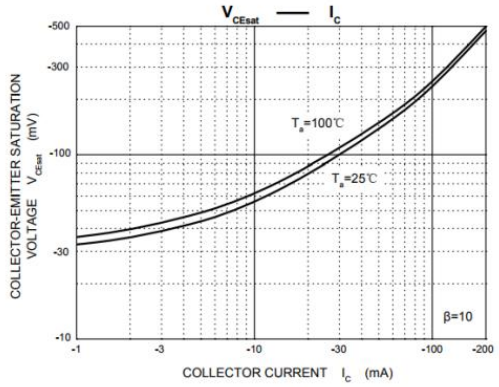
ELECTRICAL CHARACTERISTICS @ 25°C Unless Otherwise Specified

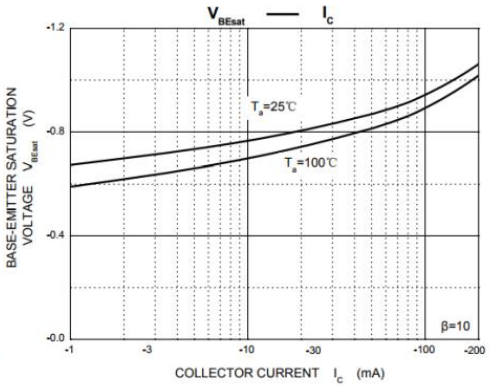
Symbol	Parameter	Test Conditions	Min	Max	Units
VCEO	Collector-Emitter Breakdown Voltage	IC=-1.0mA, IB=0	-40		V
VCBO	Collector-Base Breakdown Voltage	IC=-10μA, IE=0	-40		V
VEBO	Emitter-Base Breakdown Voltage	IE=-10μA, IC=0	-5		V
ICBO	Collector Cut-off Current	VCB=-40V, IE=0		-100	nA
ICEX	Collector Cut-off Current	VCE=-30V, VEB(OFF)=-3.0V		-50	nA
IEBO	Emitter Cut-off Current	VEB=-5V, IC=0		-100	nA
hFE(1)	DC Current Gain	IC=-10mA, VCE=-1V	100	300	
hFE(2)	DC Current Gain	IC=-50mA, VCE=-1V	60		
hFE(3)	DC Current Gain	IC=-100mA, VCE=-2V	30		
VCE(sat)	Collector-Emitter Saturation Voltage	IC=-50mA,IB=-5mA		-0.3	V
VBE(sat)	Base-Emitter Saturation Voltage	IC=-50mA,IB=-5mA		-0.95	V
fT	Current Gain-Band width Product	IC=-10mA, VCE=-20V,f=100MHz	300		MHz
td	Delay Time	VCC=-3.0V,VBE(off)=-0.5V IC=-10mA,IB1=IB2=-1.0mA		35	ns
tr	Rise Time			35	ns
ts	Storage Time	VCC=-3.0V,IC=-10mA IB1=IB2=-1.0mA		225	ns
tf	Fall Time			75	ns

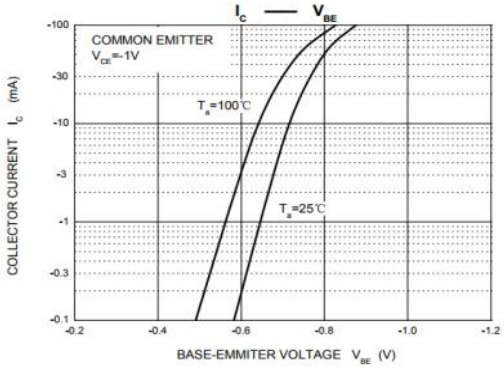
TYPICAL CHARACTERISTICS

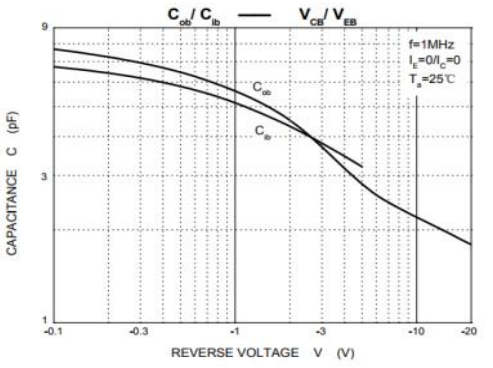


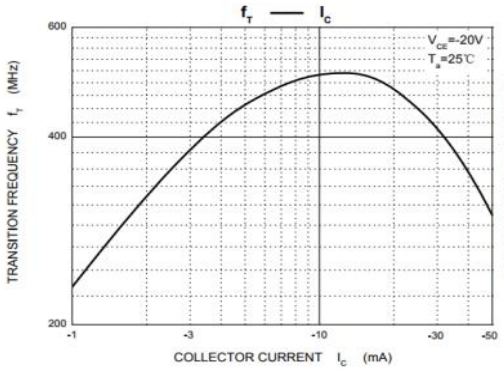


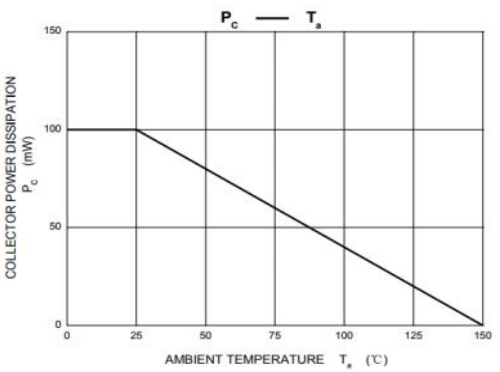




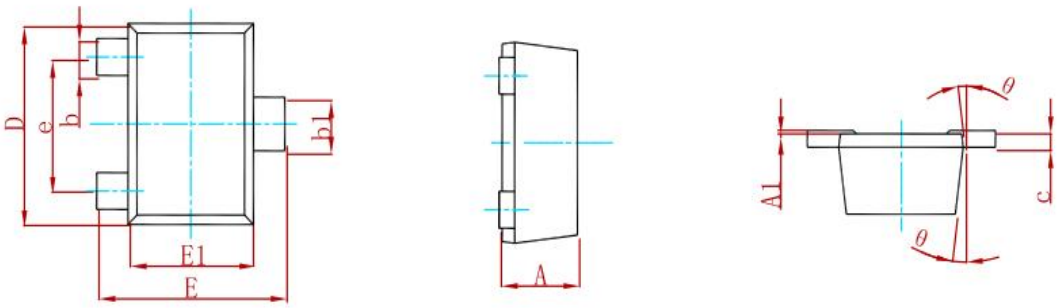






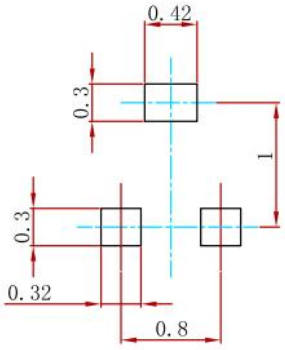


PACKAGE MECHANICAL DATA



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	
θ	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
MMBT3906M	SOT-723	8000

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