

RoHS Compliant Product  
A suffix of "-C" specifies halogen & lead-free

### FEATURES

- High Voltage Application
- Telephone Application
- Complementary to MMBTA56

### MARKING

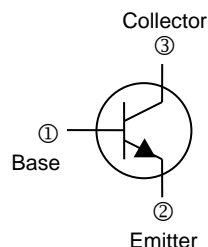
1GM

### PACKAGE INFORMATION

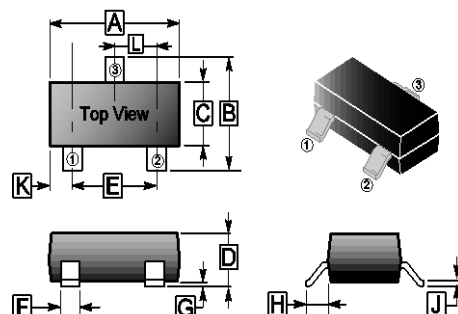
Package	MPQ	Leader Size
SOT-23	3K	7 inch

### ORDER INFORMATION

Part Number	Type
MMBTA06-C	Lead (Pb)-free and Halogen-free



### SOT-23



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.65	3.10	G	0	0.18
B	2.10	3.00	H	0.55	REF.
C	1.10	1.80	J	0.05	0.26
D	0.89	1.40	K	0.60	REF.
E	1.70	2.30	L	0.95	TYP.
F	0.28	0.55			

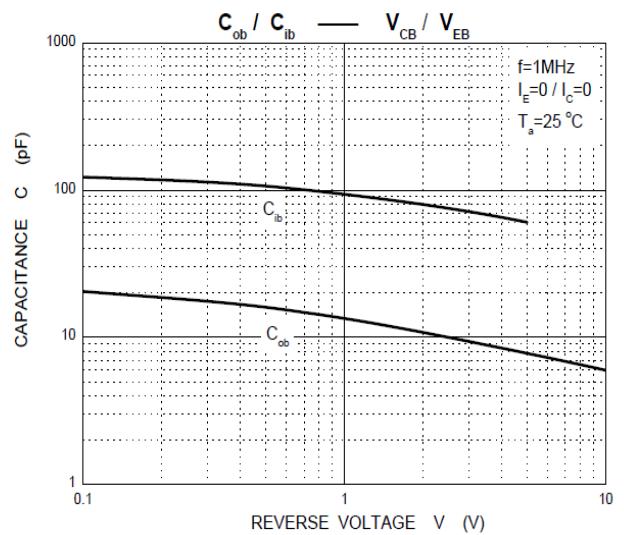
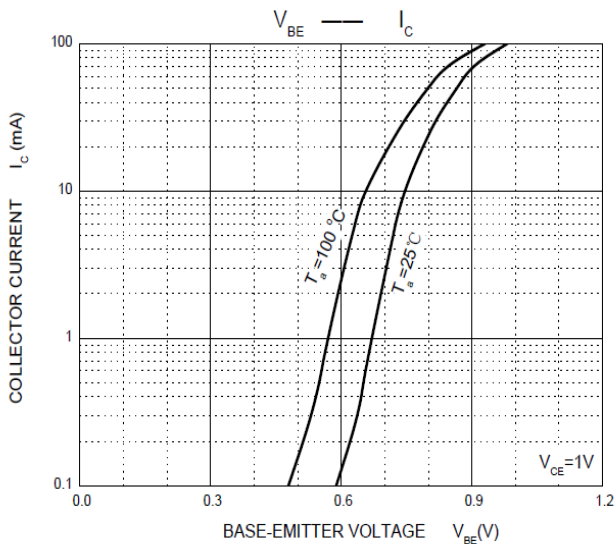
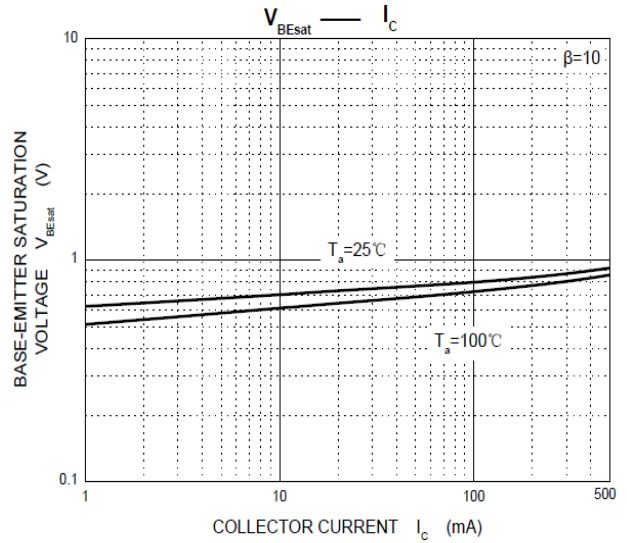
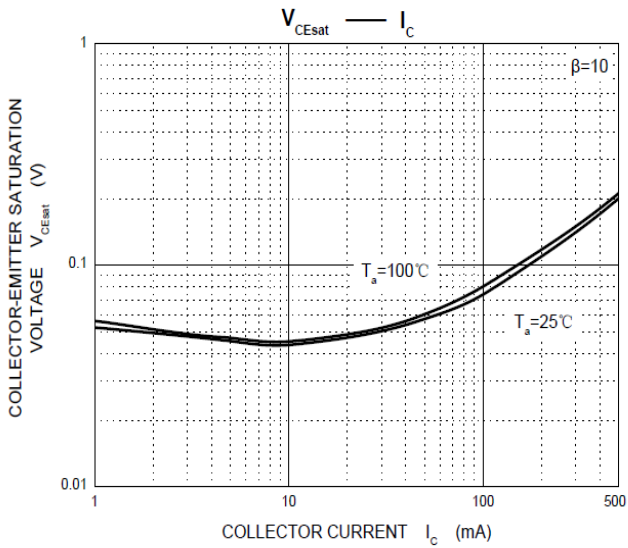
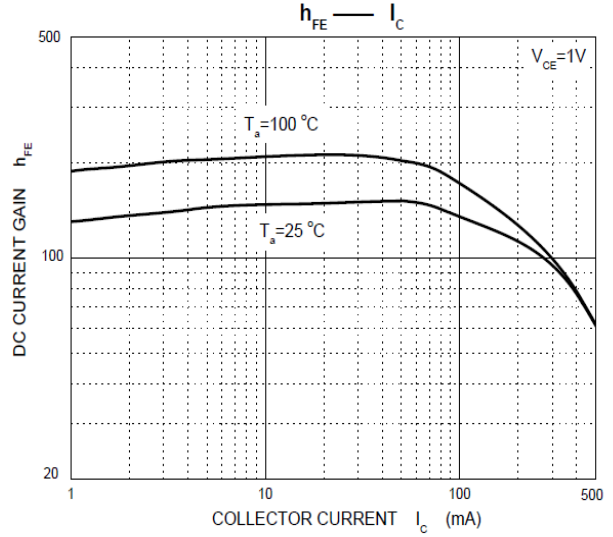
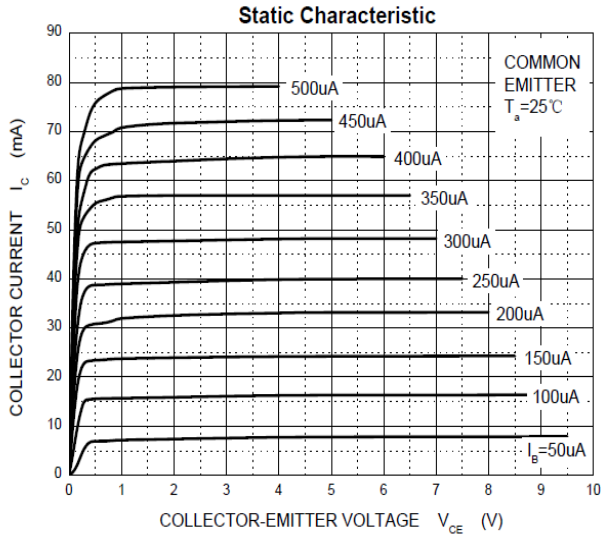
### ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub>=25°C unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Collector-Base Voltage	V <sub>CB0</sub>	80	V
Collector-Emitter Voltage	V <sub>CEO</sub>	80	V
Emitter-Base Voltage	V <sub>EBO</sub>	4	V
Collector Current-Continuous	I <sub>C</sub>	500	mA
Collector Power Dissipation	P <sub>C</sub>	300	mW
Thermal Resistance from Junction-Ambient	R <sub>θJA</sub>	416	°C / W
Junction, Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	150, -55~150	°C

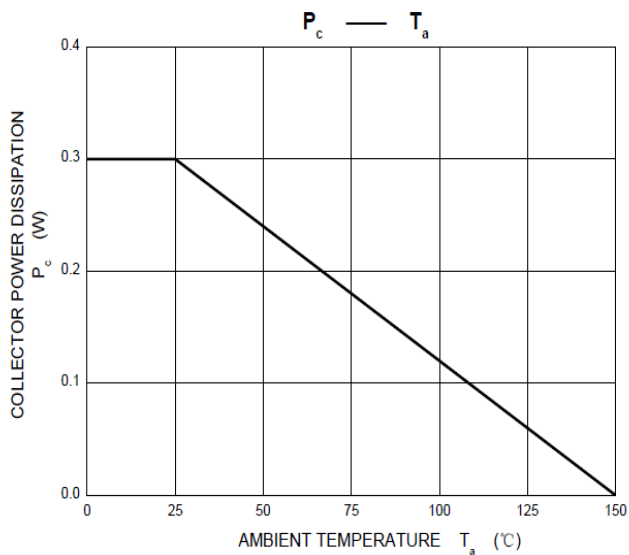
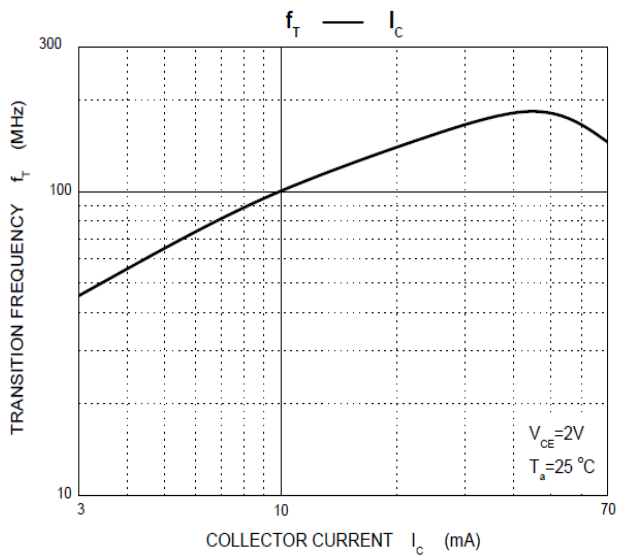
### ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-Base Breakdown Voltage	V <sub>(BR)CBO</sub>	80	-	-	V	I <sub>C</sub> =0.1mA, I <sub>E</sub> =0
Collector-Emitter Breakdown Voltage	V <sub>(BR)CEO</sub>	80	-	-	V	I <sub>C</sub> =1mA, I <sub>B</sub> =0
Emitter-Base Breakdown Voltage	V <sub>(BR)EBO</sub>	4	-	-	V	I <sub>E</sub> =0.1mA, I <sub>C</sub> =0
Collector Cut-off Current	I <sub>CB0</sub>	-	-	0.1	µA	V <sub>CB</sub> =80V, I <sub>E</sub> =0
Collector Cut-off Current	I <sub>CES</sub>	-	-	0.1	µA	V <sub>CE</sub> =60V, I <sub>B</sub> =0
Emitter Cut-off Current	I <sub>EBO</sub>	-	-	0.1	µA	V <sub>EB</sub> =3V, I <sub>C</sub> =0
DC Current Gain	h <sub>FE</sub>	100	-	400		V <sub>CE</sub> =1V, I <sub>C</sub> =10mA
		100	-	-		V <sub>CE</sub> =1V, I <sub>C</sub> =100mA
Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	-	-	0.25	V	I <sub>C</sub> =100mA, I <sub>B</sub> =10mA
Base-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	-	-	1.2	V	I <sub>C</sub> =100mA, I <sub>B</sub> =10mA
Transition Frequency	f <sub>T</sub>	100	-	-	MHz	V <sub>CE</sub> =2V, I <sub>C</sub> =10mA, f=100MHz

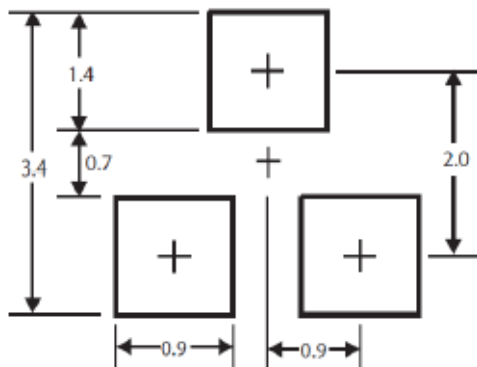
**CHARACTERISTICS CURVE**



**CHARACTERISTICS CURVE**



**Mounting Pad Layout**



\*Dimensions in millimeters