

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

FEATURES

- Small Package

MARKING

1N

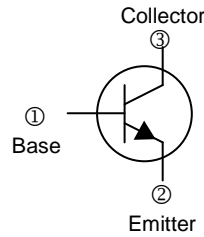
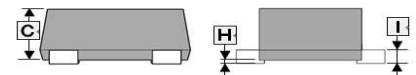
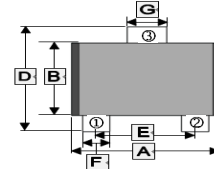
PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-723	8K	7 inch

ORDER INFORMATION

Part Number	Type
MMBT3904M-C	Lead (Pb)-free and Halogen-free

SOT-723



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.150	1.250	F	0.170	0.270
B	0.750	0.850	G	0.270	0.370
C	-	0.500	H	0	0.050
D	1.150	1.250	I	-	0.150
E	0.800TYP.				

ABSOLUTE MAXIMUM RATINGS (T_A=25°C unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Collector-Base Voltage	V _{CBO}	60	V
Collector-Emitter Voltage	V _{CEO}	40	V
Emitter-Base Voltage	V _{EBO}	6	V
Continuous Collector Current	I _C	200	mA
Power Dissipation	P _C	100	mW
Thermal Resistance from Junction-Ambient	R _{θJA}	1250	°C/W
Junction, Storage Temperature	T _J , T _{STG}	150, -55~150	°C

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-Base Breakdown Voltage	V _{(BR)CBO}	60	-	-	V	I _C =10μA, I _E =0
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	40	-	-	V	I _C =1mA, I _B =0
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	6	-	-	V	I _E =10μA, I _C =0
Collector Cut-off Current	I _{CEX}	-	-	50	nA	V _{CE} =30V, V _{BE(off)} = -3V
Emitter Cut-off Current	I _{EBO}	-	-	100	nA	V _{EB} =5V, I _C =0
DC Current Gain	h _{FE}	40	-	-		V _{CE} =1V, I _C =0.1mA
		70	-	-		V _{CE} =1V, I _C =1mA
		100	-	300		V _{CE} =1V, I _C =10mA
		60	-	-		V _{CE} =1V, I _C =50mA
Collector-Emitter Saturation Voltage	V _{CE(sat)}	-	-	0.2	V	I _C =10mA, I _B =1mA
		-	-	0.3		I _C =50mA, I _B =5mA
Base-Emitter Saturation Voltage	V _{BE(sat)}	0.65	-	0.85	V	I _C =10mA, I _B =1mA
		-	-	0.95		I _C =50mA, I _B =5mA
Transition Frequency	f _T	-	300	-	MHz	V _{CE} =20V, I _C =10mA, f=100MHz
Output Capacitance	C _{ob}	-	4	-	pF	V _{CB} =5V, I _E =0, f=1MHz
Input Capacitance	C _{ib}	-	8	-	pF	V _{EB} =0.5V, I _C =0, f=1MHz
Noise Figure	NF	-	5	-	dB	V _{CE} =5V, I _C =0.1mA f=100MHz, R _S =1kΩ
Delay Time	t _d	-	35	-	ns	V _{CC} =3V, V _{BE(off)} = -0.5V I _C =10mA, I _{B1} =1mA
Rise Time	t _r	-	35	-		
Storage Time	t _s	-	200	-		
Fall Time	t _f	-	50	-		

CHARACTERISTIC CURVES

