

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

FEATURES

- We declare that the material of product compliance with RoHS requirements
- Capable of 300mW of power dissipation

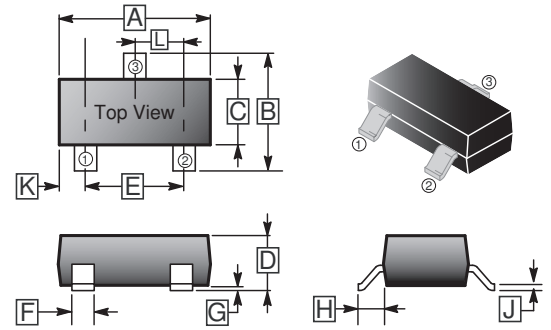
MARKING

1P

PACKAGE INFORMATION

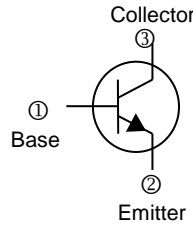
Package	MPQ	Leader Size
SOT-23	3K	7 inch

SOT-23



ORDER INFORMATION

Part Number	Type
MMBT2222AP-C	Lead (Pb)-free and Halogen-free



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.70	3.10	G	0	0.18
B	2.10	2.95	H	0.55	REF.
C	1.20	1.7	J	0.08	0.20
D	0.89	1.3	K	0.6	REF.
E	1.70	2.3	L	0.95	BSC.
F	0.30	0.51			

ABSOLUTE MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

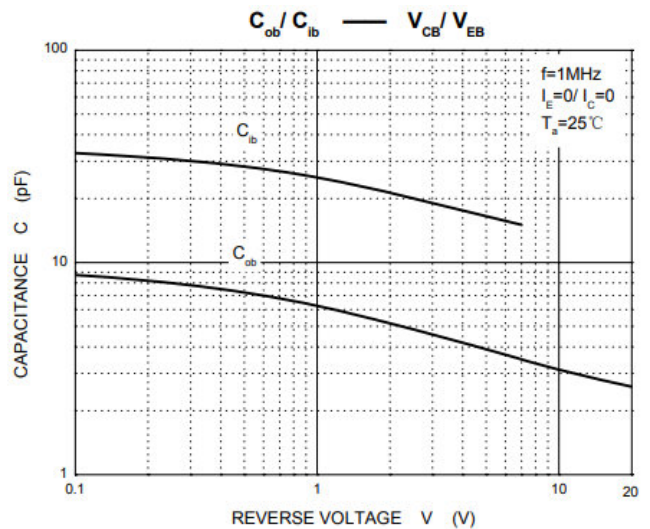
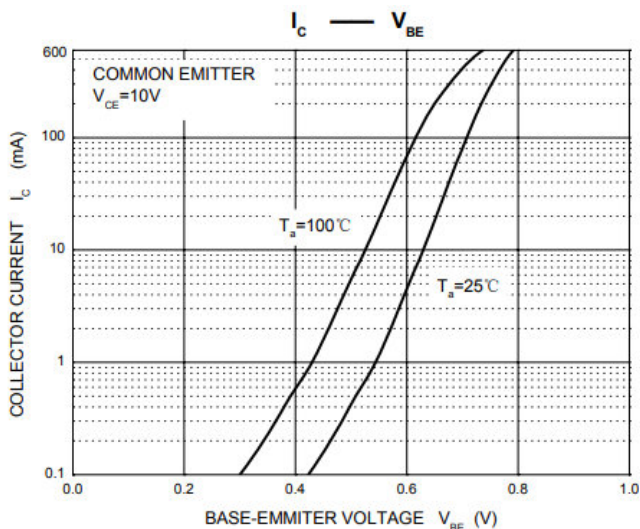
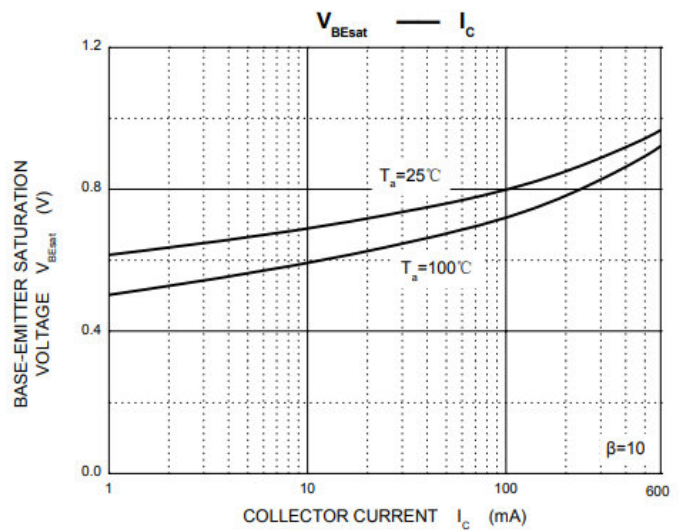
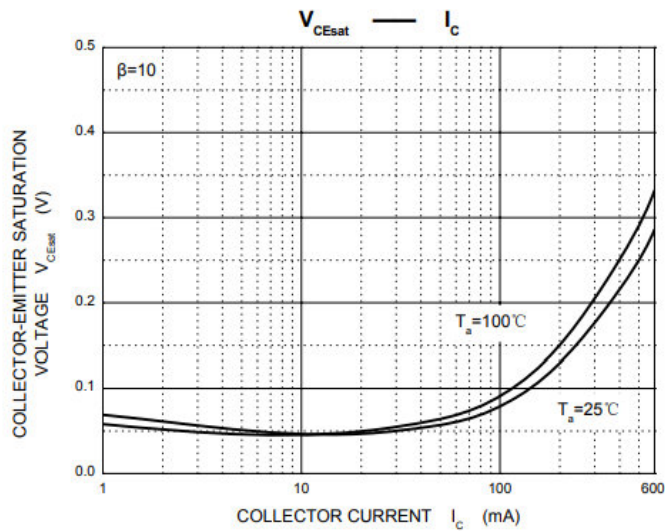
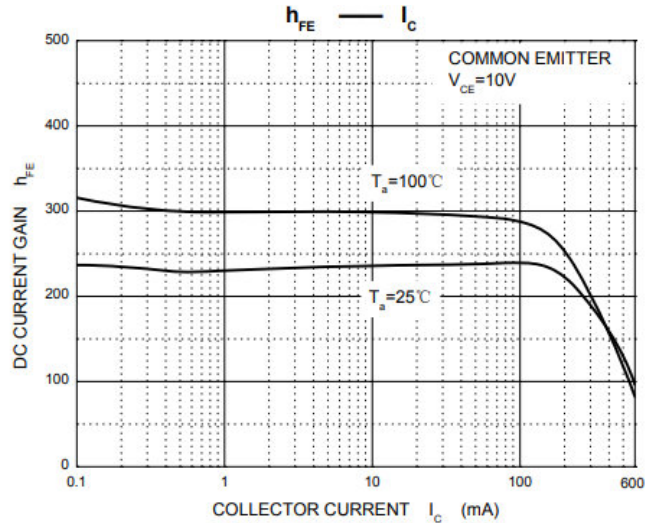
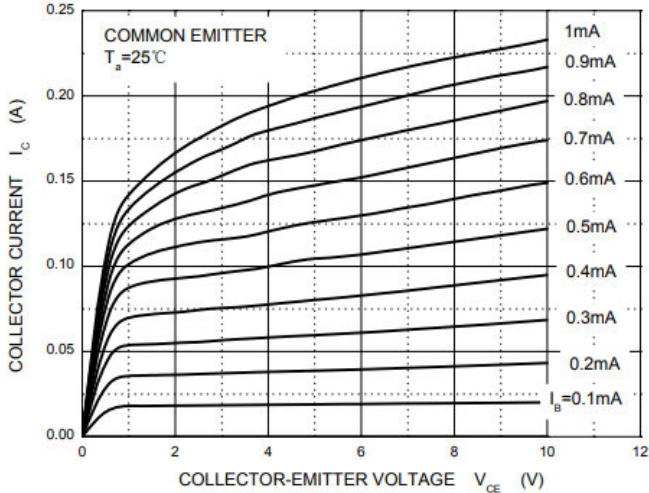
Parameter	Symbol	Ratings	Unit
Collector-Base Voltage	V_{CBO}	75	V
Collector-Emitter Voltage	V_{CEO}	40	V
Emitter-Base Voltage	V_{EBO}	6	V
Continuous Collector Current	I_C	600	mA
Collector Power Dissipation	P_C	300	mW
Thermal Resistance from Junction-Ambient	$R_{\theta JA}$	417	$^{\circ}\text{C}/\text{W}$
Junction, Storage Temperature	T_J, T_{STG}	150, -55~150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	75	-	-	V	$I_C=10\mu\text{A}, I_E=0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	40	-	-	V	$I_C=10\text{mA}, I_B=0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	6	-	-	V	$I_E=10\mu\text{A}, I_C=0$
Collector Cut-off Current	I_{CEX}	-	-	0.01	μA	$V_{CE}=60\text{V}, V_{BE}=3\text{V}$
DC Current Gain ³	h_{FE}	35	-	-	V	$V_{CE}=10\text{V}, I_C=0.1\text{mA}$
		50	-	-		$V_{CE}=10\text{V}, I_C=1.0\text{mA}$
		75	-	-		$V_{CE}=10\text{V}, I_C=10\text{mA}$
		100	-	300		$V_{CE}=10\text{V}, I_C=150\text{mA}$
		50	-	-		$V_{CE}=1.0\text{V}, I_C=150\text{mA}$
		40	-	-		$V_{CE}=10\text{V}, I_C=500\text{mA}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	-	-	0.3	V	$I_C=150\text{mA}, I_B=15\text{mA}$
		-	-	1		$I_C=500\text{mA}, I_B=50\text{mA}$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	0.6	-	1.2	V	$I_C=150\text{mA}, I_B=15\text{mA}$
		-	-	2		$I_C=500\text{mA}, I_B=50\text{mA}$
Transition Frequency	f_T	-	300	-	MHz	$V_{CE}=20\text{V}, I_C=20\text{mA}, f=100\text{MHz}$
Output Capacitance	C_{ob}	-	8	-	pF	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$

CHARACTERISTIC CURVES

Static Characteristic



CHARACTERISTIC CURVES

