Elektronische Bauelemente

MMBT2222FW-C

0.6A, 75V

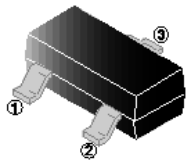
NPN Plastic Encapsulate Transistors

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

FEATURES

- Epitaxial Planar Die Construction
- Complementary PNP Type Available(MMBT2907FW)
- Ideal for Medium Power Amplification and Switching
- Small Package

SOT-523

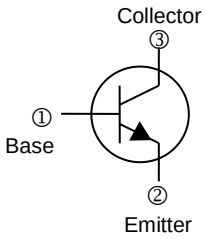


MARKING

1P

PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-523	3K	7 inch



ORDER INFORMATION

Part Number	Type
MMBT2222FW-C	Lead (Pb)-free and Halogen-free

MAXIMUM RATINGS (T_A=25°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
Collector Current-Continuous	I_C	600	mA
Collector Power Dissipation	P_C	150	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	833	°C / W
Junction & Storage Temperature	T_J, T_{STG}	-55~150	°C

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	75	-	-	V	I_C=10μA, I_E=0
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	40	-	-	V	I_C=10mA, I_B=0
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	6	-	-	V	I_E=10μA, I_C=0
Emitter Cut-Off Current	I_{CEX}	-	-	10	nA	V_{CE}=60V, $V_{BE(off)}$=3V
DC Current Gain	h_{FE}	35	-	-		I_C=0.1mA, V_{CE}=10V
		50	-	-		I_C=1mA, V_{CE}=10V
		75	-	-		I_C=10mA, V_{CE}=10V
		100	-	300		I_C=150mA, V_{CE}=10V
		40	-	-		I_C=500mA, V_{CE}=10V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	-	-	0.3	V	I_C=150mA, I_B=15mA
		-	-	1		I_C=500mA, I_B=50mA
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	-	-	1.2	V	I_C=150mA, I_B=15mA
		-	-	2		I_C=500mA, I_B=50mA
Transition Frequency	f_T	300	-	-	MHz	V_{CE}=20V, I_C=20mA, f=100MHz
Collector Output Capacitance	C_{ob}	-	8	-	pF	V_{CB}=10 V, I_E=0, f=1MHz
Delay Time	T_d	-	10	-	nS	V_{CC}=30V, $V_{BE(off)}$= -0.5V, I_C=150mA, I_{B1}=15mA
Rise Time	T_r	-	25	-		
Storage Time	T_S	-	225	-	nS	V_{CC}=30V, I_C=150mA, I_{B1}= -I_{B2}=15mA
Fall Time	T_F	-	60	-		

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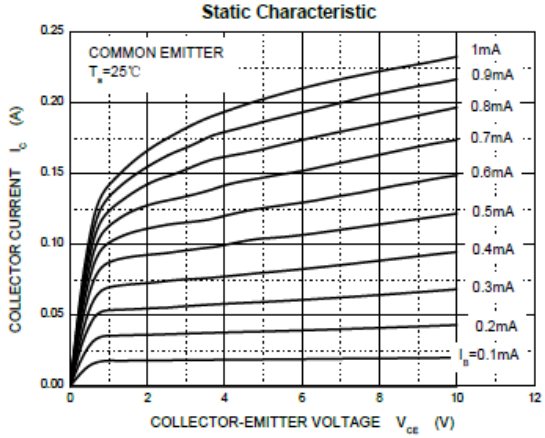
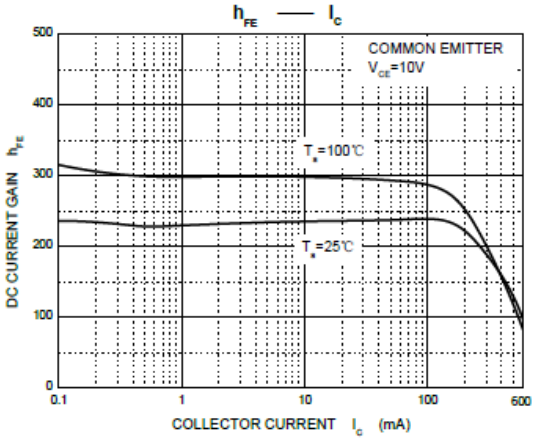
TYPICAL CHARACTERISTICS

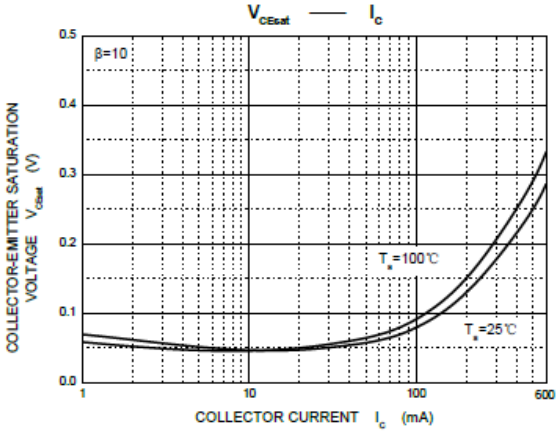
Static Characteristic



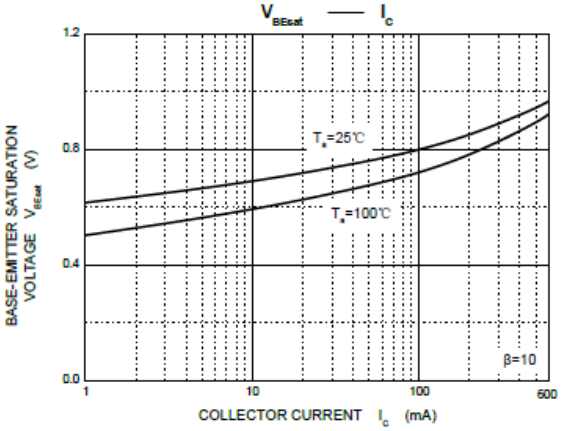
h_{FE} —— I_C



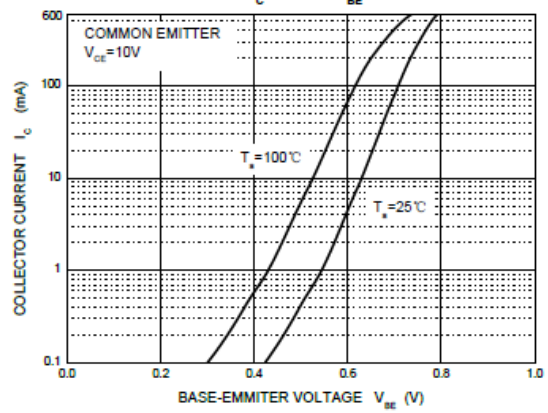
V_{CEsat} —— I_C



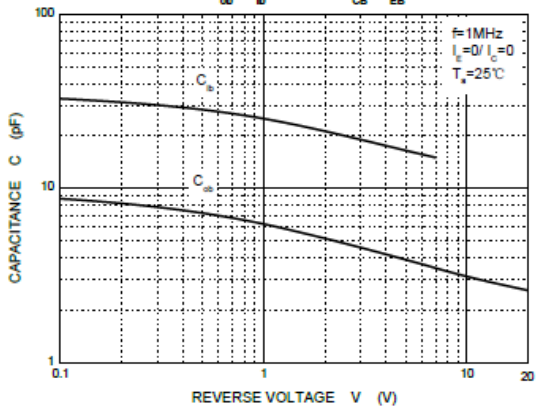
V_{BEsat} —— I_C



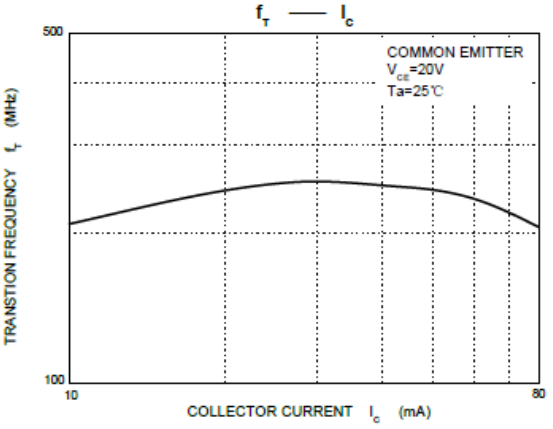
I_C —— V_{BE}



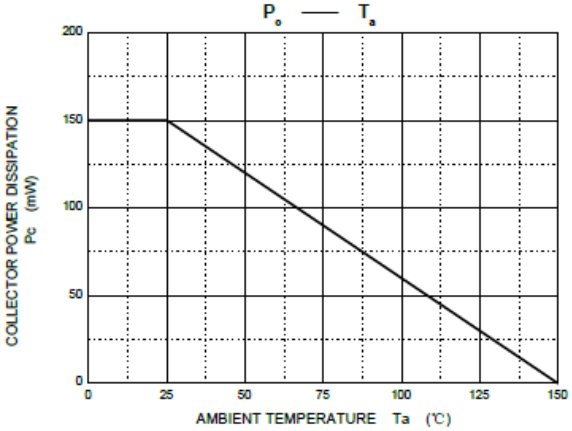
C_{ob} / C_{ib} —— V_{CB} / V_{EB}



f_T —— I_C

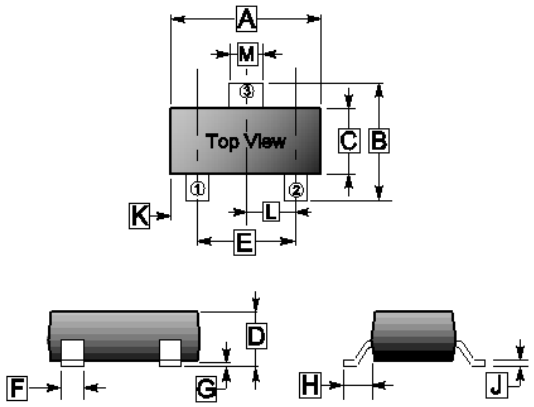


P_o —— T_a



PACKAGE OUTLINE DIMENSIONS

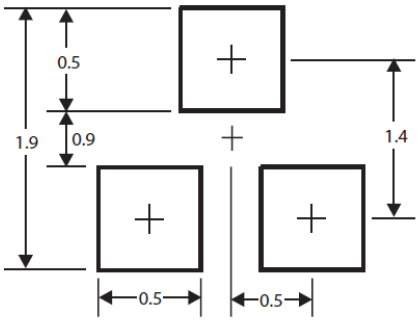
SOT-523



REF.	Millimeter	
	Min.	Max.
A	1.50	1.70
B	1.45	1.75
C	0.70	0.90
D	0.60	0.90
E	0.90	1.10
F	0.15	0.35
G	-	0.10
H	0.55 REF.	
J	0.08	0.20
K	-	
L	0.50 TYP.	
M	0.25	0.45

MOUNTING PAD LAYOUT

SOT-523



*Dimensions in millimeters