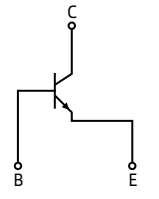


Features

- Collector currents up to 600 mA.
- General purpose amplifier.
- Complementary to MMBT2907A.



SOT23



Equivalent Circuit

Absolute Maximum Ratings($T_A=25^{\circ}\text{C}$)

Symbol	Parameter	Value	Unit
V_{CB0}	Collector-Base Voltage	75	V
V_{CE0}	Collector-Emitter Voltage	40	V
V_{EB0}	Emitter-Base Voltage	6	V
I_C	Collector Current	0.6	A
P_C	Collector Power Dissipation	300	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	400	$^{\circ}\text{C/W}$
T_J, T_{stg}	Operation Junction And Storage Temperature Range	-55 ~ +150	$^{\circ}\text{C/W}$

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

Symbol	Parameter	Test conditions	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=10\mu\text{A}, I_E=0$	75			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=10\text{mA}, I_B=0$	40			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=10\mu\text{A}, I_C=0$	6			V
I_{CEX}	Collector cut-off current	$V_{CE}=30\text{V}, V_{EB(off)}=-3\text{V}$			10	nA
I_{CBO}	Collector cut-off current	$V_{CB}=60\text{V}, I_E=0$			10	nA
I_{EBO}	Emitter cut-off current	$V_{EB}=3\text{V}, I_C=0$			100	nA
$h_{FE(1)}$	DC current gain(1)	$V_{CE}=10\text{V}, I_C=150\text{mA}$	100		300	
$h_{FE(2)}$	DC current gain(2)	$V_{CE}=10\text{V}, I_C=0.1\text{mA}$	40			
$h_{FE(3)}$	DC current gain(3)	$V_{CE}=10\text{V}, I_C=500\text{mA}$	42			
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C=150\text{mA}, I_B=15\text{mA}$			0.3	V
$V_{BE(sat)}$	Base-emitter saturation voltage				1.2	V
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C=500\text{mA}, I_B=50\text{mA}$			1.0	V
$V_{BE(sat)}$	Base-emitter saturation voltage				2.0	V
f_T	Transition frequency	$V_{CE}=20\text{V}, I_C=20\text{mA}, f=100\text{MHz}$	300			MHz
t_d	Delay time	$V_{CE}=30\text{V}, V_{BE(off)}=-0.5\text{V}, I_C=150\text{mA}, I_{B1}=15\text{mA}$			10	ns
t_r	Rise time				25	ns
t_s	Storage time	$V_{CC}=3\text{V}, I_C=150\text{mA}, I_{B1}=I_{B2}=15\text{mA}$			225	ns
t_f	Fall time				60	ns

Ordering information

Product ID	Pack	Naming rule	Marking	$h_{FE(1)}$	Qty(PCS)
MMBT2222A	SOT23	MMBT2222A 产品名称 product name	1P	100 ~ 300	3000

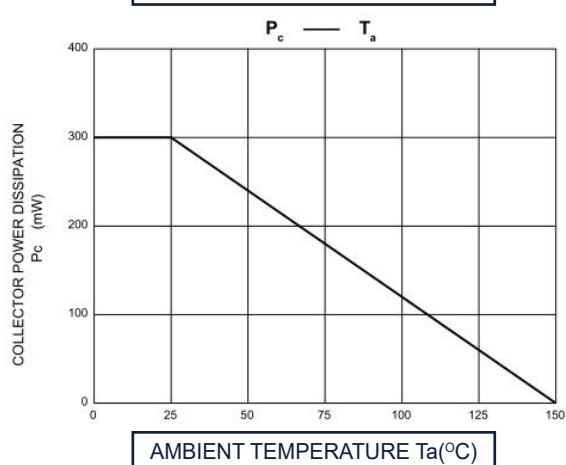
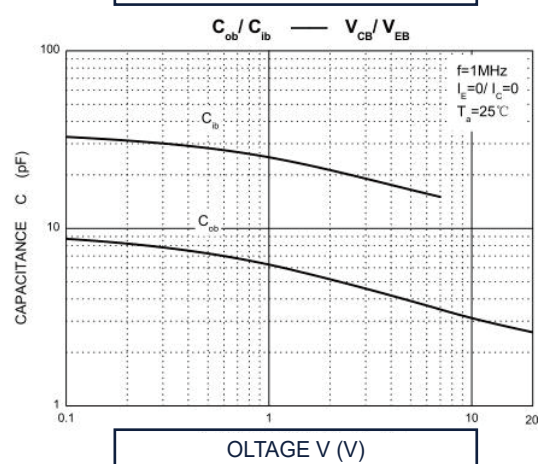
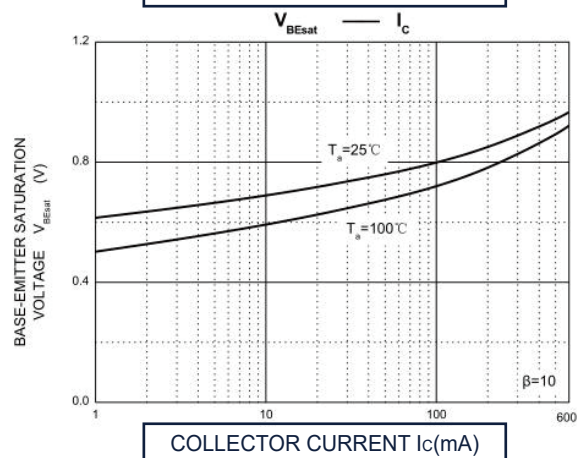
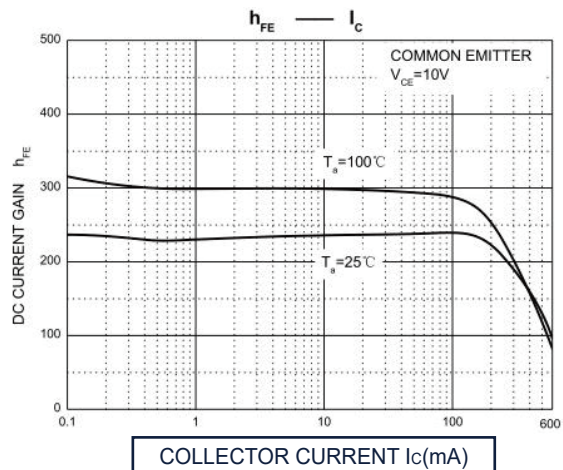
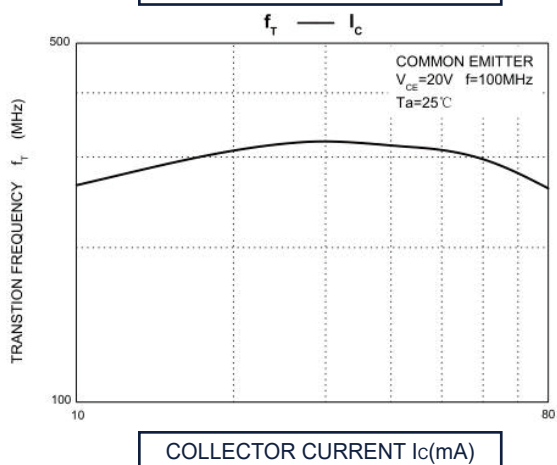
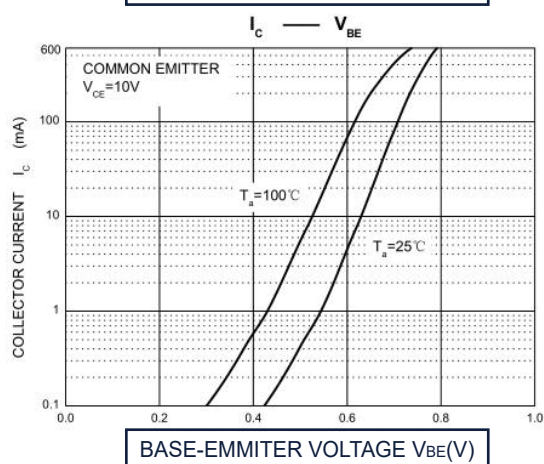
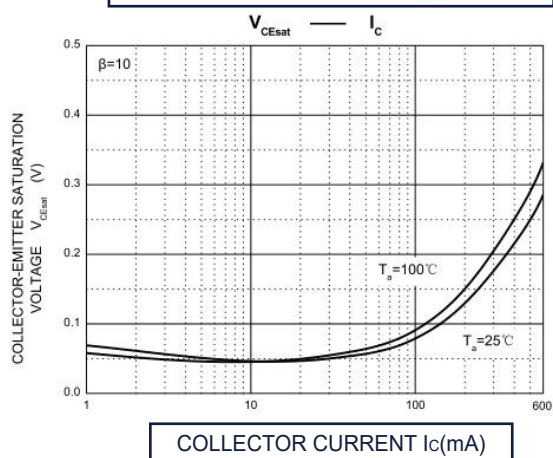
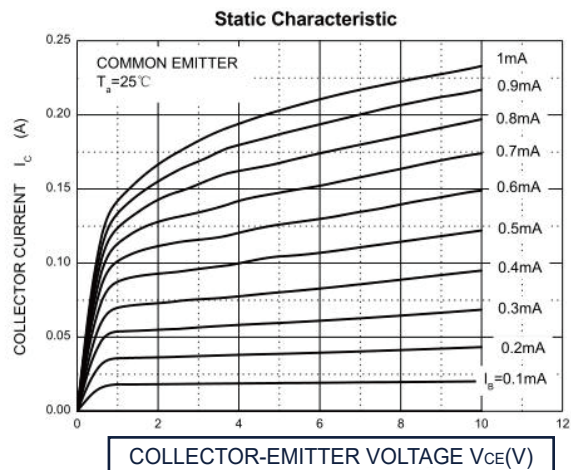


TWTLSEMI

TL-MMBT2222A

SOT23 Plastic-Encapsulate Transistors (NPN)

Typical Characteristics





SOT23 Package Outline Dimensions



Symbol	Dimensions in Millimeters	
	mm	
	Min	Max
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950TYP	
e1	1.800	2.000
L	0.550REF	
L1	0.300	0.500
θ	0°	8°