

Plastic-Encapsulate Transistors
TRANSISTOR (PNP)

FEATURE

- ◆Complementary to MMST2222A
- ◆Power Dissipation of 250mW
- ◆High Stability and High Reliability

Mechanical Data

- ◆Case: SOT-323
- ◆Epoxy UL: 94V-0
- ◆Mounting Position: Any

Maximum Ratings & Thermal Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified.)

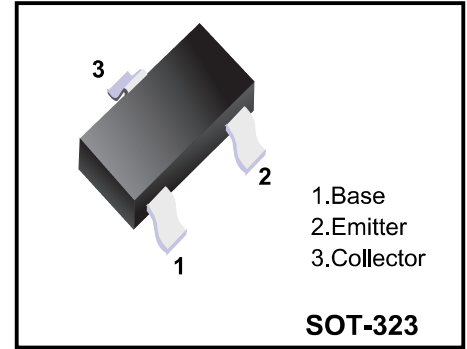
Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	-60	V
Collector-Emitter Voltage	V_{CEO}	-60	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current -Continuous	I_C	-600	mA
Collector Power Dissipation	P_D	250	mW
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55~+150	°C

Electrical Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified.)

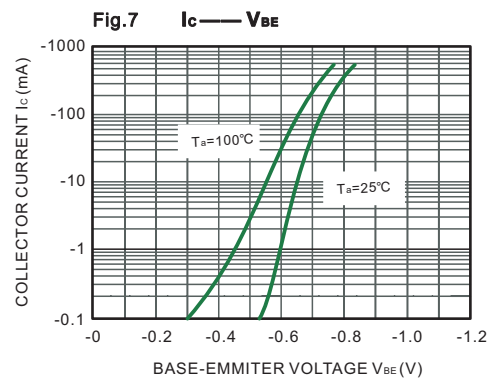
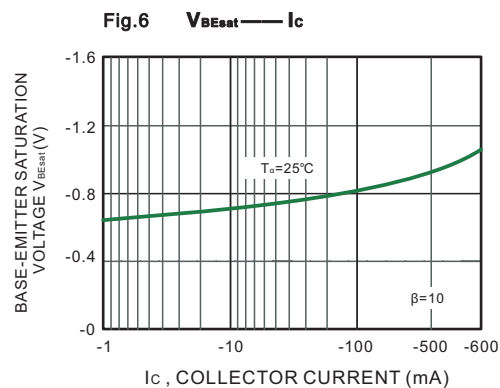
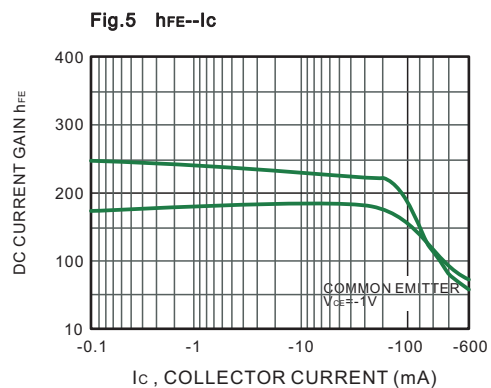
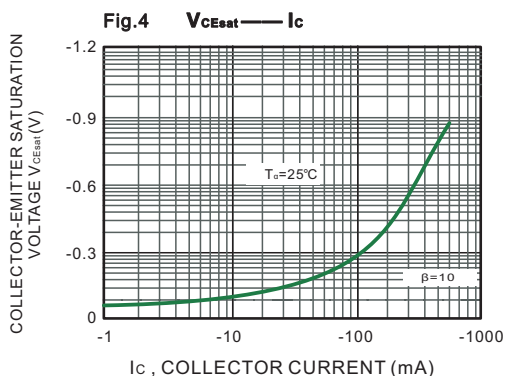
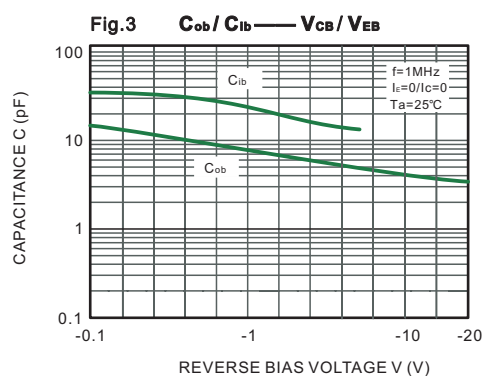
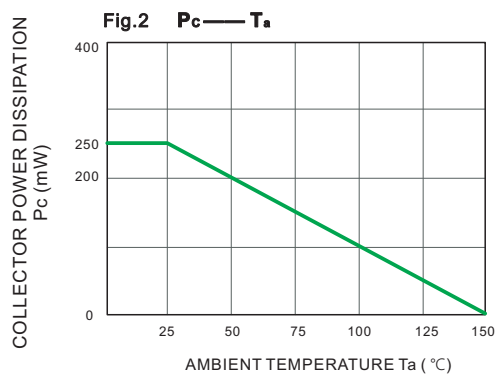
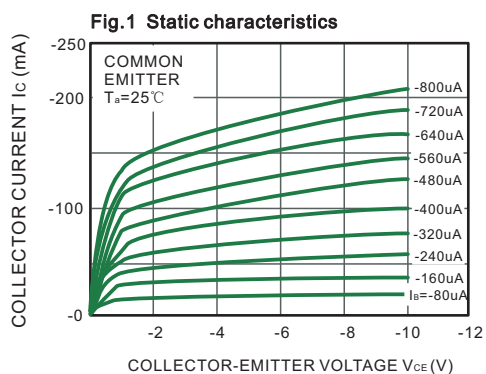
Parameter	Test Condition	Symbols	Min	Max	Unit
Collector-base breakdown voltage	$I_C=-10\mu A, I_E=0$	$V_{(BR)CBO}$	-60		V
Collector-emitter breakdown voltage*	$I_C=-10mA, I_B=0$	$V_{(BR)CEO}$	-60		V
Emitter-base breakdown voltage	$I_E=-10\mu A, I_C=0$	$V_{(BR)EBO}$	-5		V
Collector cut-off current	$V_{CB}=-50V, I_E=0$	I_{CBO}		-100	nA
Collector cut-off current	$V_{CB}=-50V, I_B=0$	I_{CES}		-100	nA
Emitter cut-off current	$V_{EB}=-3V, I_C=0$	I_{EBO}		-100	nA
DC current gain	$V_{CE}=-10V, I_C=-150mA^*$	$h_{FE(1)}$	100	300	
	$V_{CE}=-10V, I_C=-0.1mA^*$	$h_{FE(2)}$	75		
	$V_{CE}=-10V, I_C=-1mA^*$	$h_{FE(3)}$	100		
	$V_{CE}=-10V, I_C=-10mA^*$	$h_{FE(4)}$	100		
	$V_{CE}=-10V, I_C=-500mA^*$	$h_{FE(5)}$	50		
Collector-emitter saturation voltage	$I_C=-150mA, I_B=-15mA^*$	$V_{CE(sat)1}$		-0.4	V
	$I_C=-500mA, I_B=-50mA^*$	$V_{CE(sat)2}$		-1.6	V
Base -emitter saturation voltage	$I_C=-150mA, I_B=-15mA^*$	$V_{BE(sat)1}$		-1.30	V
	$I_C=-500mA, I_B=-50mA^*$	$V_{BE(sat)2}$		-2.60	V
Transition frequency	$V_{CE}=-20V, I_C=50mA, f=100MHz$	f_T	200		MHz
Output capacitance	$V_{CB}=-10V, I_E=0, f=0.1MHz$	C_{ob}		8	pF
Input capacitance	$V_{EB}=-2V, I_C=0, f=0.1MHz$	C_{ib}		30	pF
Delay time	$V_{CC}=-30V, V_{BE(off)}=-1.5V, I_C=-150mA, I_{B1}=-15mA$	t_d		10	nS
Rise time		t_r		40	nS
Storage time	$V_{CC}=-6V, I_C=-150mA, I_{B1}=I_{B2}=-15mA$	t_s		80	nS
Fall time		t_f		30	nS

*Pulse test: pulse width≤300us, duty cycle≤2.0%



Marking Code	
MMBT2907AW	K3F

Typical Characteristics



Ordering information

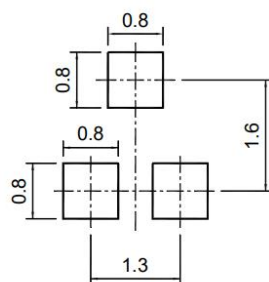
Package	Packing Description	Base Quantity	Packing Quantity
SOT-323	Tape/Reel, 7" reel	3000pcs/Reel	24000PCS/Box 120000PCS/Carton

Package Dimensions

SOT-323

Dim.	Millimeter (mm)		mil	
	Min.	Max.	Min.	Max.
A	0.8	1.1	32	43
A1	0.1		4	
bp	0.3	0.4	12	16
C	0.10	0.25	4	10
D	1.8	2.2	71	87
E	1.15	1.35	45	53
e	1.3		51	
e1	0.65		26	
HE	2.0	2.2	79	87
Lp	0.15	0.45	6	18
Q	0.13	0.23	5.1	9
v	0.2		8	
W	0.2		8	

The recommended mounting pad size



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