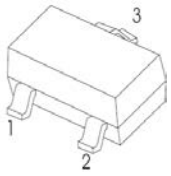
JIANGSU CHANGJING ELECTRONICS TECHNOLOGY CO., LTD.

SOT-23 Plastic-Encapsulate Transistors

MMBT2907A TRANSISTOR (PNP)

SOT-23

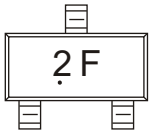


1. BASE
2. EMITTER
3. COLLECTOR

FEATURES

- Epitaxial planar die construction
- Complementary NPN Type available(MMBT2222A)

Marking: 2F



Solid dot = Green molding compound device, if none,the normal device.

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-60	V
V_{CEO}	Collector-Emitter Voltage	-60	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -Continuous	-600	mA
P_D	Total Device Dissipation	250	mW
$R_{\theta JA}$	Thermal Resistance Junction to Ambient	500	℃/W
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55 to +150	℃

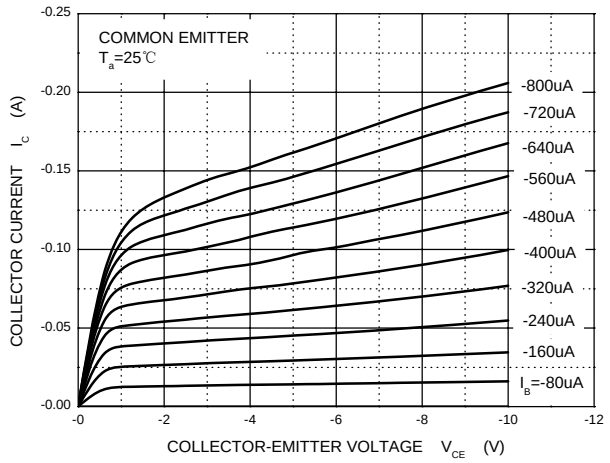
ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=-10μA,I_E=0	-60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$*	I_C=-10mA,I_B=0	-60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=-10μA,I_C=0	-5			V
Collector cut-off current	I_{CBO}	V_{CB}=-50V,I_E=0			-20	nA
Base cut-off current	I_{EBO}	V_{EB}=-3V, I_C =0			-10	nA
Collector cut-off current	I_{CEX}	V_{CE}=-30 V, $V_{BE(off)}$ =-0.5V			-50	nA
DC current gain	$h_{FE(1)}$	V_{CE}=-10V,I_C=-150mA	100		300	
	$h_{FE(2)}$	V_{CE}=-10V,I_C=-0.1mA	75			
	$h_{FE(3)}$	V_{CE}=-10V,I_C=-1mA	100			
	$h_{FE(4)}$	V_{CE}=-10V,I_C=-10mA	100			
	$h_{FE(5)}$	V_{CE}=-10V,I_C=-500mA	50			
Collector-emitter saturation voltage	$V_{CE(sat)}$*	I_C=-150mA,I_B=-15mA			-0.4	V
	$V_{CE(sat)}$*	I_C=-500mA,I_B=-50mA			-1.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$*	I_C=-150mA,I_B=-15mA			-1.3	V
	$V_{BE(sat)}$*	I_C=-500mA,I_B=-50mA			-2.6	V
Transition frequency	f_T	V_{CE}=-20V,I_C=-50mA,f=100MHz	200			MHz
Delay time	t_d	V_{CE}=-30V,I_C=-150mA,$_{B1}$=-15mA			10	ns
Rise time	t_r				25	ns
Storage time	t_S	V_{CE}=-6V,I_C=-150mA, I_{B1}=- I_{B2}=- 15mA			225	ns
Fall time	t_f				60	ns

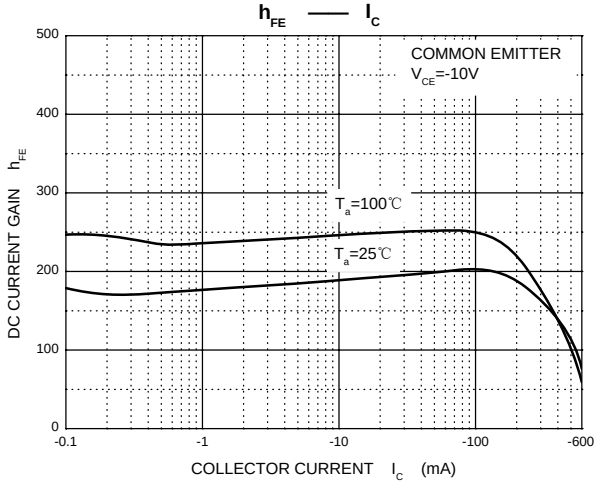
* pulse test: Pulse Width ≤300μs, Duty Cycle≤2.0%.

Typical Characteristics

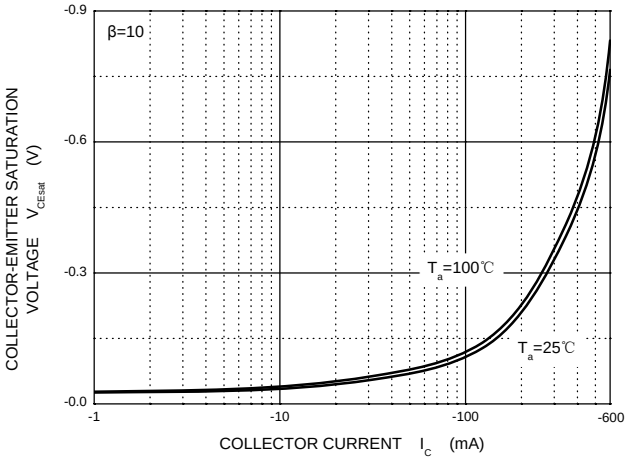
Static Characteristic



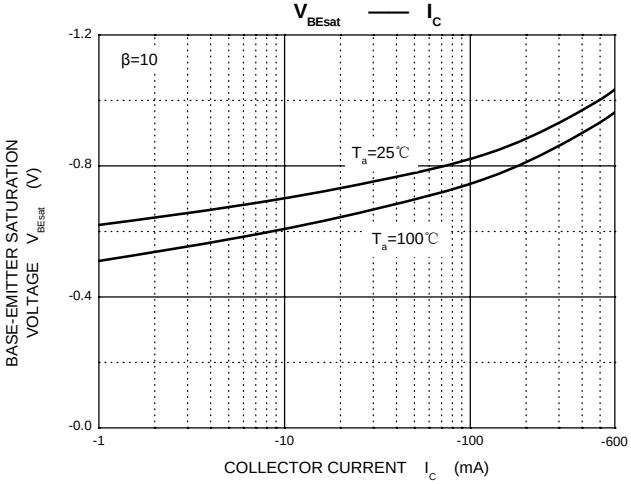
h_{FE} —— I_C



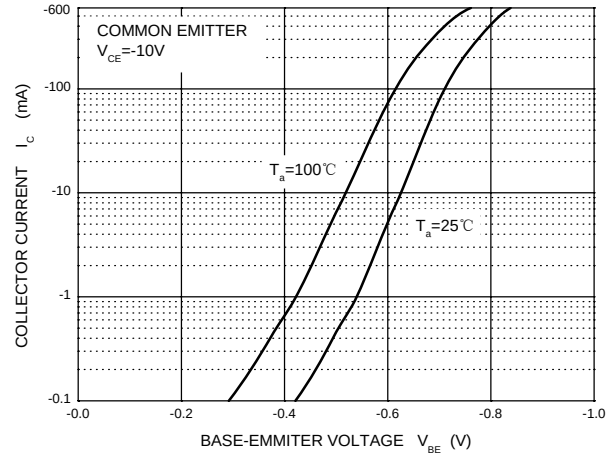
V_{CEsat} —— I_C



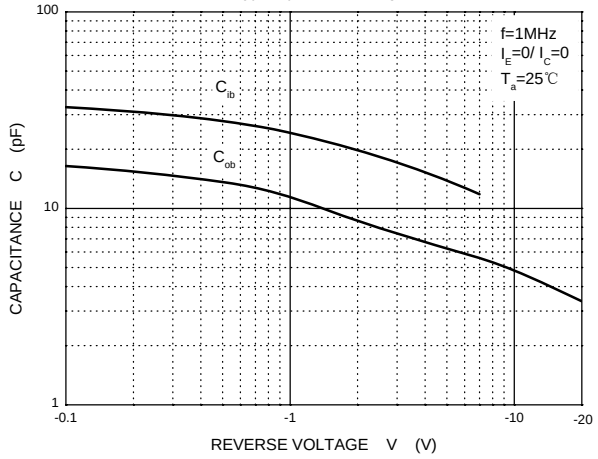
V_{BEsat} —— I_C



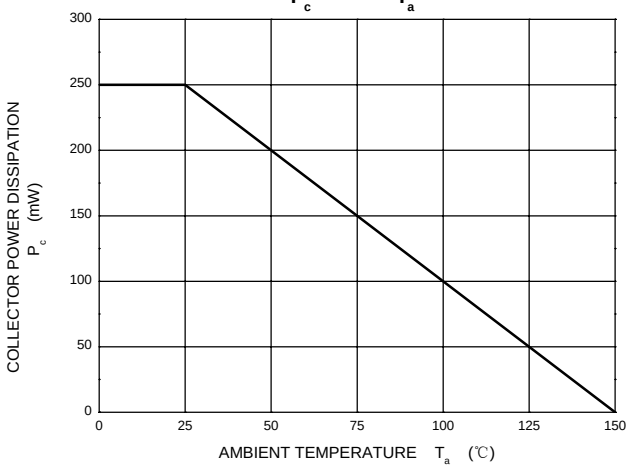
I_C —— V_{BE}



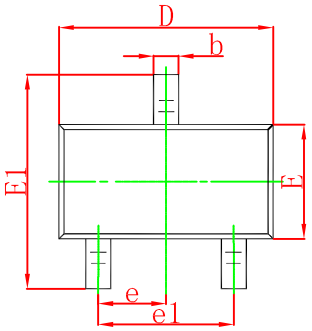
C_{ob}/ C_{ib} —— V_{CB}/ V_{EB}

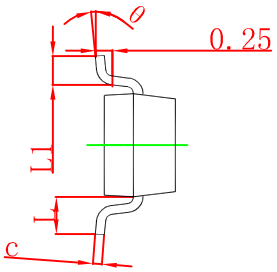


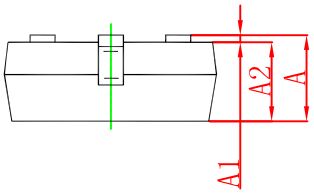
P_c —— T_a



SOT-23 Package Outline Dimensions

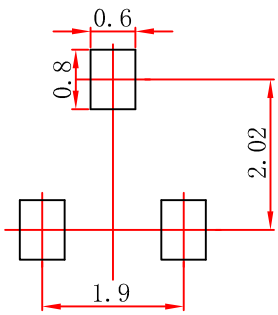






Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

SOT-23 Suggested Pad Layout

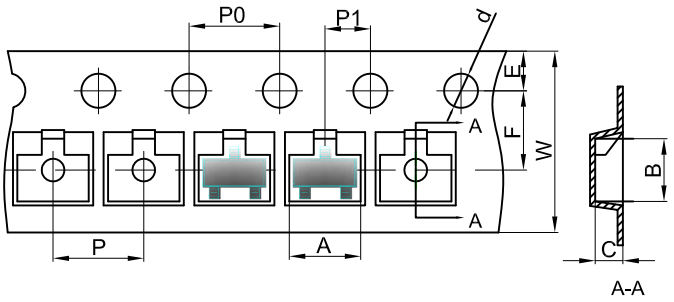


Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

NOTICE
JSCJ reserves the right to make modifications,enhancements,improvements,corrections or other changes without further notice to any product herein. JSCJ does not assume any liability arising out of the application or use of any product described herein.

SOT-23 Tape and Reel

SOT-23 Embossed Carrier Tape

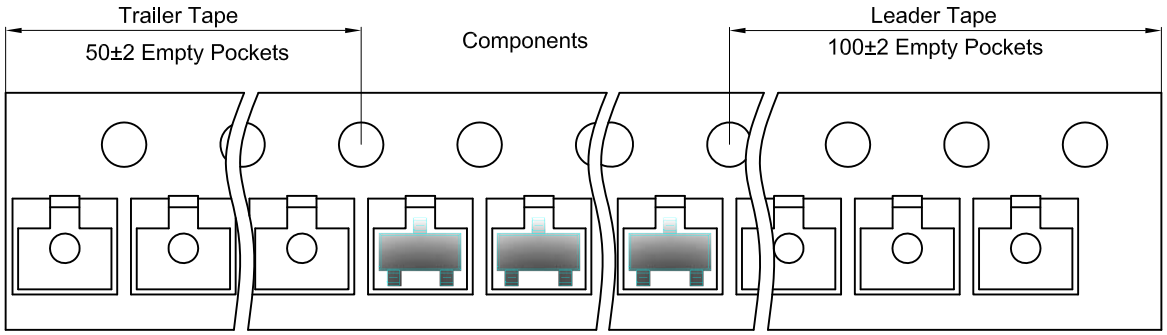


Packaging Description:

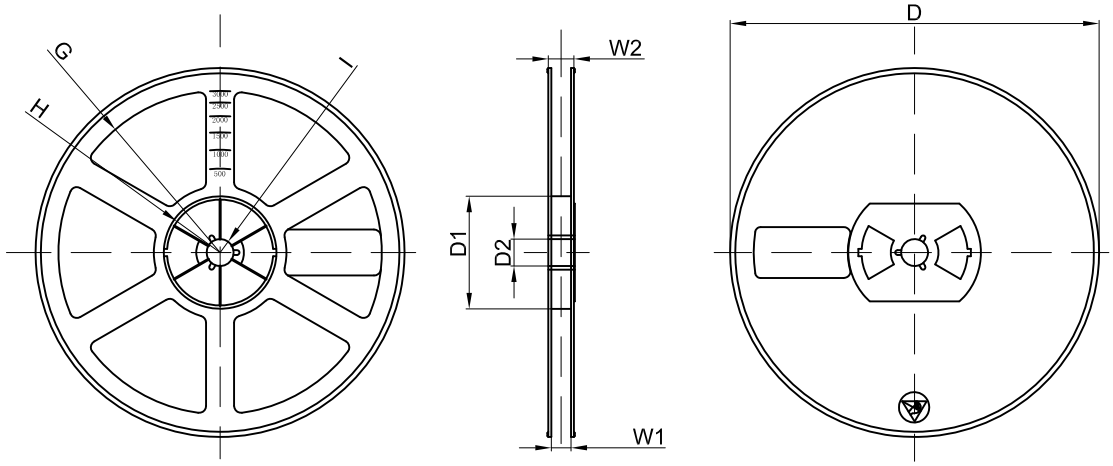
SOT-23 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 17.8cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

SOT-23 Tape Leader and Trailer



SOT-23 Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7"Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	45,000 pcs	203×203×195	180,000 pcs	438×438×220	