MMBT2907A
SOT-23 Plastic-Encapsulate Transistors (PNP)

General description
SOT-23 Plastic-Encapsulate Transistors (PNP)

FEATURES
- Complementary to MMBT2907A
- Power Dissipation of 250mW
- High Stability and High Reliability
- SOT-23 Small Outline Plastic Package
- Epoxy UL: 94V-0

DEVICE MARKING CODE: 2F

Maximum Ratings & Thermal Characteristics (Ratings at 25℃ ambient temperature unless otherwise specified.)

Parameters	Symbol	Value	Unit
Collector-Base Voltage	VCBO	-60	V
Collector-Emitter Voltage	VCEO	-60	V
Emitter -Base Voltage	VEBO	-5	V
Collector Current-Continuous	IC	-600	mA
Collector Power Dissipation	PC	250	mW
Junction Temperature	Tj	150	℃
Storage Temperature	Tstg	-55-+150	℃
Thermal resistance from junction to ambient	RθJA	500	℃/W

Electrical Characteristics (Ratings at 25℃ ambient temperature unless otherwise specified).

Parameter	Symbols	Test Condition	Limits		Unit
			Min	Max	
Collector-base breakdown voltage	**$V_{(BR)CBO}$**	I_C=-100uA, I_E=0	-60		V
Collector-emitter breakdown voltage	**$V_{(BR)CEO}$** *	I_C=-1mA, I_B=0	-60		V
Emitter-base breakdown voltage	**$V_{(BR)EBO}$**	I_E=-10uA, I_C=0	-5		V
Collector cut-off current	**I_{CBO}**	V_{CB}=-50V, I_E=0		-20	nA
Emitter cut-off current	**I_{EBO}**	V_{EB}=-3V, I_C=0		-10	nA
Collector cut-off current	**I_{CEX}**	V_{CE}=-30V, $V_{BE(off)}$=-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	**$V_{CE(sat)1}$** *	I_C=-150mA, I_B=-15mA		-0.4	V
	$V_{CE(sat)2}$ *	I_C=-500mA, I_B=-50mA		-1.6	V
Base -emitter saturation voltage	**$V_{BE(sat)1}$** *	I_C=-150mA, I_B=-15mA		-1.30	V
	$V_{BE(sat)2}$ *	I_C=-500mA, I_B=-50mA		-2.60	V
Transition frequency	**f_T**	V_{CE}=-20V, I_C=-50mA,f=100MHz	200		MHz
Delay time	td	V_{CE}=-30V, I_C=-150mA, I_{B1}=-15mA		10	nS
Rise time	tr			25	nS
Storage time	ts	V_{CE}=-6V, I_C=-150mA, I_{B1}=I_{B2}=-15mA		225	nS
Fall time	tf			60	nS

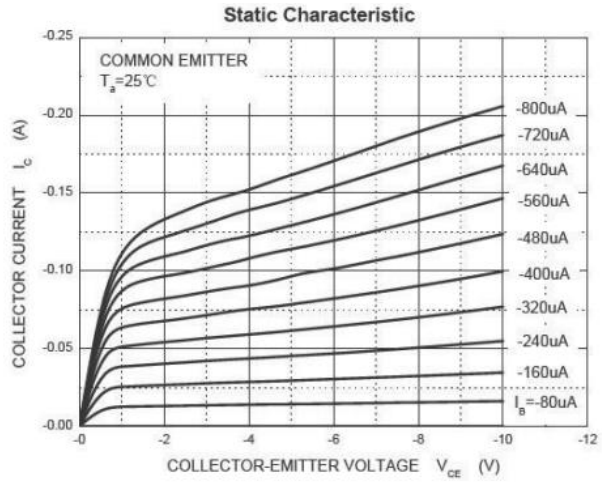
*Pulse test: pulse width≤300us, duty cycle≤2.0%

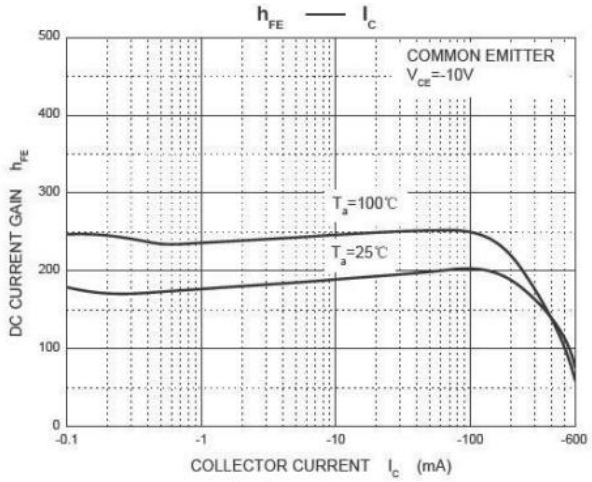
MMBT2907A

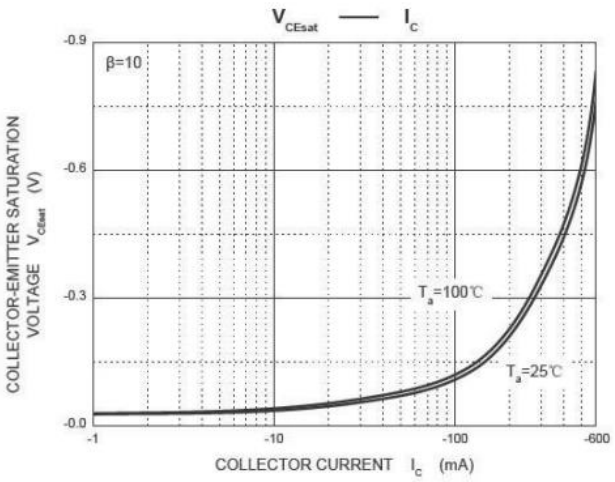
CLASSIFICATION OF hFE(1)

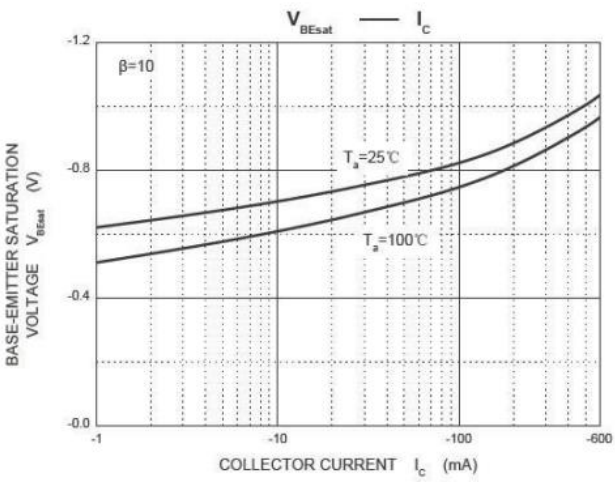
HFE	100-300	
RANK	L	H
RANGE	100-200	200-300

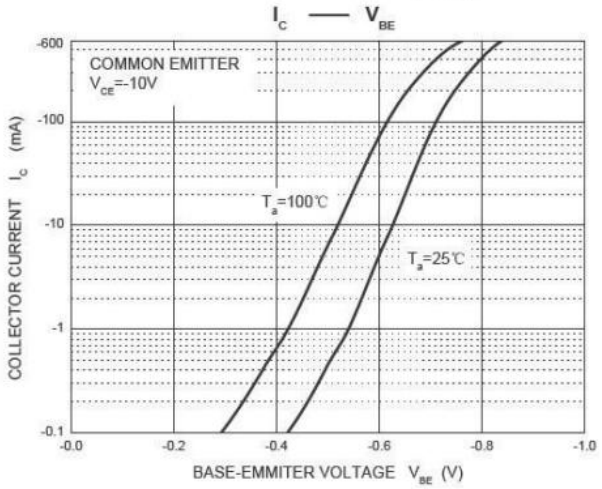
RATING AND CHARACTERISTIC CURVES

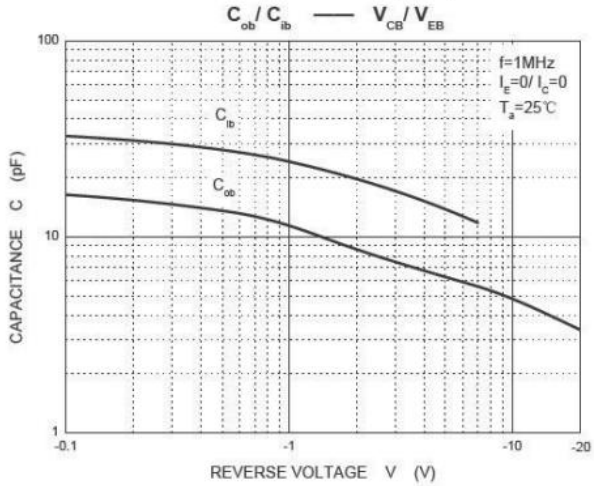




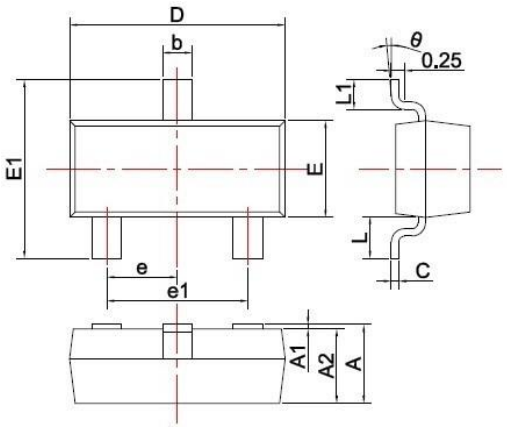








SOT-23 PACKAGE OUTLINE Plastic surface mounted package

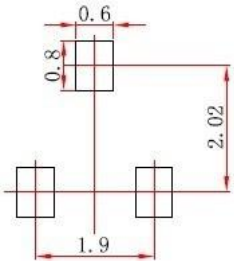


SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950TYP	
e1	1.800	2.000
L	0.550REF	
L1	0.300	0.500
θ	0°	8°

Unit: mm

Precautions: PCB Design

Recommended land dimensions for SOT-23 diode. Electrode patterns for PCBs



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

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