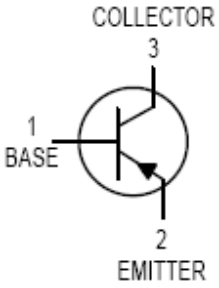
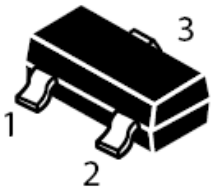
LITE-ON SEMICONDUCTORS

MMBT2907A

PNP General Purpose Transistor





FEATURES

- Ideal for Medium Power Amplification and Switching
- Complementary PNP Type available(MMBT2222A)

MECHANICAL DATA

- Case: SOT-23 Plastic
- Case material: “Green” molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl)
- Lead Free in RoHS 2002/95/EC Compliant

Maximum Ratings @ T_A = 25℃

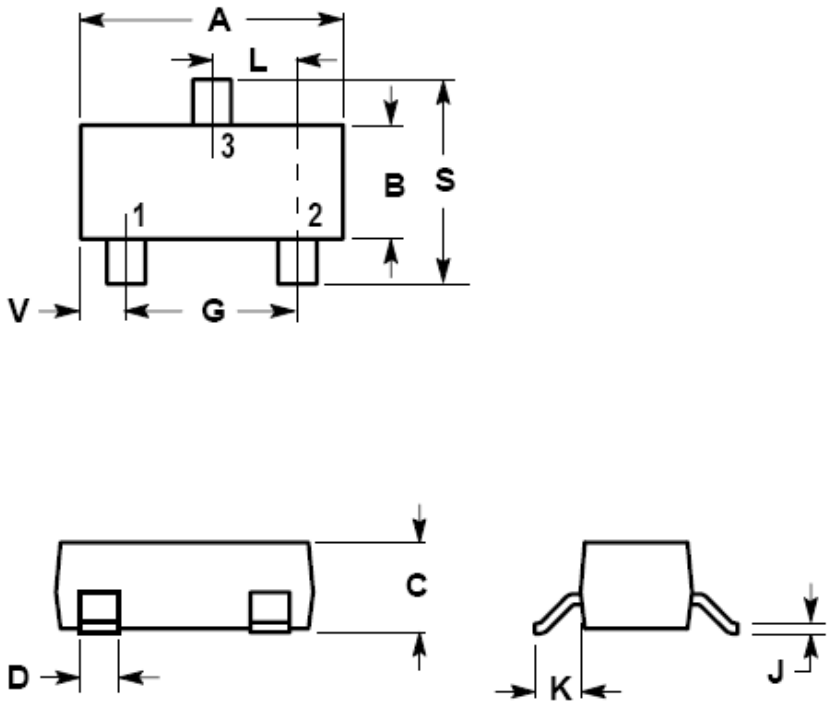
Characteristic	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	-60	V
Collector-Emitter Voltage	V_{CEO}	-60	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current -Continuous	I_C	-600	mA
Collector Power Dissipation	P_C	250	mW
Thermal Resistance, junction to Ambient	$R_{\Theta JA}$	500	℃/W
Junction Temperature	T_J	150	℃
Storage Temperature Range	T_{STG}	-55~+150	℃

Electrical Characteristics @ T_A = 25℃ unless otherwise specified

Characteristic	Test Condition	Symbol	Min.	Typ.	Max.	Unit
Collector-base breakdown voltage	I_C=-10μA,I_E=0	V_{CBO}	-60			V
Collector-emitter breakdown voltage	I_C=-10mA,I_B=0	V_{CEO}	-60			V
Emitter-base breakdown voltage	I_E=-10μA,I_C=0	V_{EBO}	-5			V
Collector-base cut-off current	V_{CB}=-50V,I_E=0	I_{CBO}			-20	nA
Emitter-base cut-off current	V_{EB}=-3V,I_C=0	I_{EBO}			-10	nA
Collector-emitter cut-off current	V_{CE}=-30V,$V_{BE(off)}$=-0.5V	I_{CEX}			-50	nA
DC current gain	V_{CE}=-10V,I_C=-150mA	h_{FE1}	100		300	
	V_{CE}=-10V,I_C=-0.1mA	h_{FE2}	75			
	V_{CE}=-10V,I_C=-1mA	h_{FE3}	100			
	V_{CE}=-10V,I_C=-10mA	h_{FE4}	100			
	V_{CE}=-10V,I_C=-500mA	h_{FE5}	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			-1.3	V
	I_C=-500mA,I_B=-50mA	V_{BE}(sat)2			-2.6	V
Transition frequency	V_{CE}=-20V,I_C=-50mA, f=100MHz	f_T	200			MHz
Delay time	V_{CC}=-30V, I_C=-150mA , I_{B1}=-15mA	T_d			10	nS
Rise time		T_r			25	nS
Storage time	V_{CC}=-6V, I_C=-150mA I_{B1}=-I_{B2}=-15mA	T_s			225	nS
Fall time		T_f			60	nS

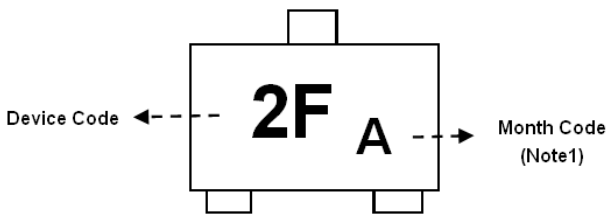
REV.3 , Jan - 2013, KSPR11

SOT-23 Outline Dimension



Symbol	Dimension In Millimeters	
	Min	Max.
A	2.80	3.04
B	1.20	1.40
C	0.89	1.11
D	0.37	0.50
G	1.78	2.04
J	0.085	0.177
K	0.35	0.69
L	0.89	1.02
S	2.10	2.64
V	0.45	0.60

Device Marking:



Note1:

Odd Year	J	O	L	C	K	B	P	D	M	E	G	F
Even Year	W	N	Y	T	R	H	A	I	U	X	Z	S

Electrical characteristic curves

Fig.1 DC Current Gain vs. Collector Current

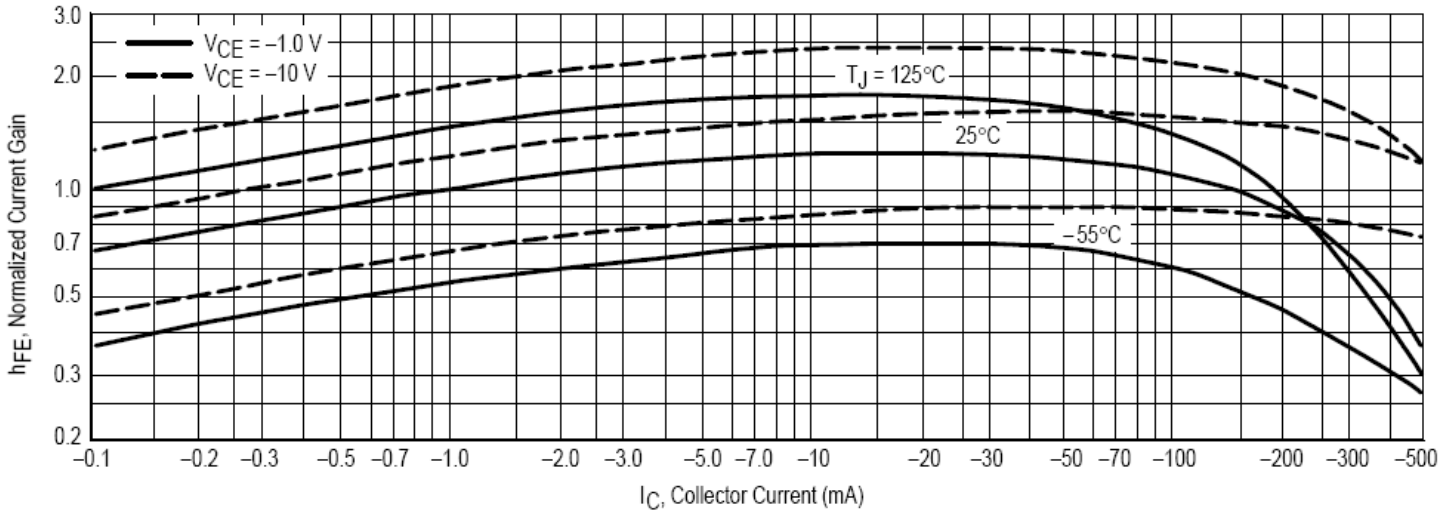


Fig.2 "On" Voltages

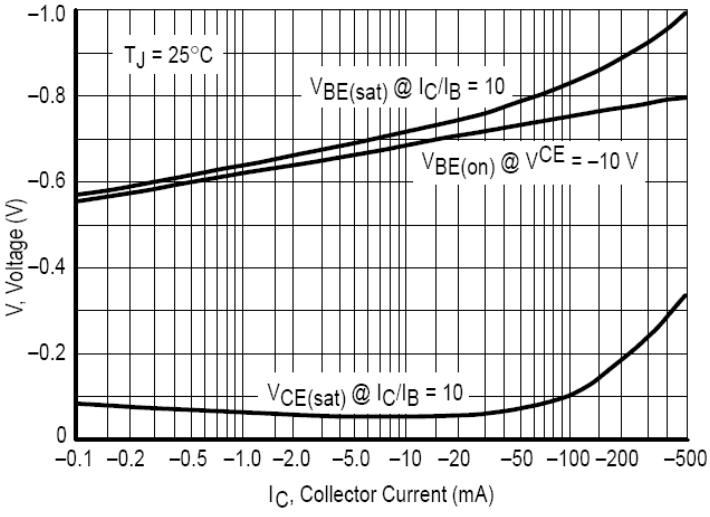
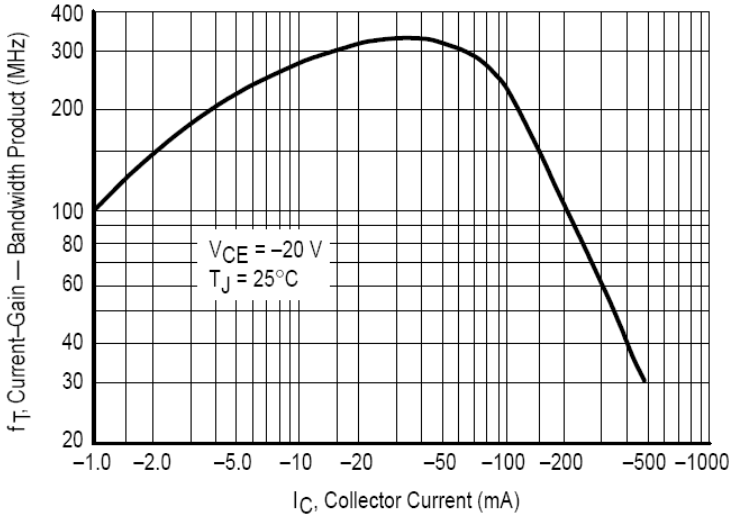


Fig.3 Gain-Bandwidth Product vs. Collector Current



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