KODENSHI AUK

MMBT3906EF

PNP Silicon Transistor

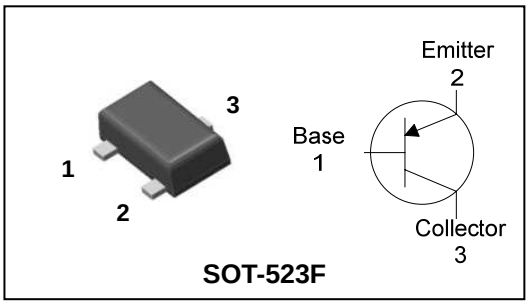
Descriptions

- Small signal application
- Switching application

Features

- Low collector saturation voltage
- Low collector output capacitance
- Complementary pair with MMBT3904EF

PIN Connection



Ordering Information

Type NO.	Marking	Package Code
MMBT3906EF	Y □ ① ②	SOT-523F

①Device Code ②Year&Week Code

Absolute Maximum Ratings

Ta=25°C

Characteristic	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	-40	V
Collector-emitter voltage	V_{CEO}	-40	V
Emitter-base voltage	V_{EBO}	-5	V
Collector current	I_C	-200	mA
Collector power dissipation	P_C	150	mW
Junction temperature	T_j	150	°C
Storage temperature range	T_{stg}	-55~150	°C

Electrical Characteristics

Ta=25°C

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-base breakdown voltage	BV_{CBO}	I_C=-10μA, I_E=0	-40	-	-	V
Collector-emitter breakdown voltage	BV_{CEO}	I_C=-1mA, I_B=0	-40	-	-	V
Emitter-base breakdown voltage	BV_{EBO}	I_E=-10μA, I_C=0	-5	-	-	V
Collector cut-off current	I_{CEX}	V_{CE}=-30V, V_{EB}=-3V	-	-	-50	nA
DC current gain	h_{FE}	V_{CE}=-1V, I_C=-10mA	100	-	300	-
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-50mA, I_B=-5mA	-	-	-0.4	V
Transition frequency	f_T	V_{CE}=-20V, I_C=-10mA, f=100MHz	250	-	-	MHz
Collector output capacitance	C_{ob}	V_{CB}=-5V, I_E=0, f=1MHz	-	-	4.5	pF
Delay time	t_d	V_{CC}=-3V_{dc}, $V_{BE(off)}$=-0.5V_{dc}, I_C=-10mA_{dc}, I_{B1}=-1mA_{dc}	-	-	35	ns
Rise time	t_r		-	-	35	ns
Storage time	t_s	V_{CC}=-3V_{dc}, I_C=-10mA_{dc}, I_{B1}=I_{B2}=-1mA_{dc}	-	-	225	ns
Fall Time	t_f		-	-	75	ns

Electrical Characteristic Curves

Fig. 1 P_C-T_a

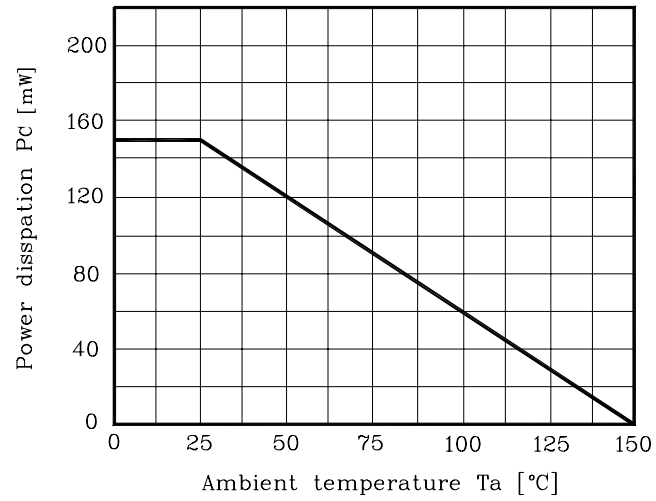


Fig. 2 h_{FE}-I_C

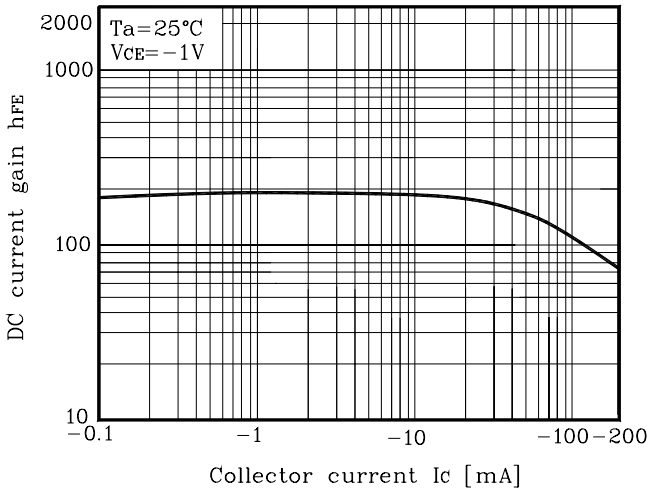
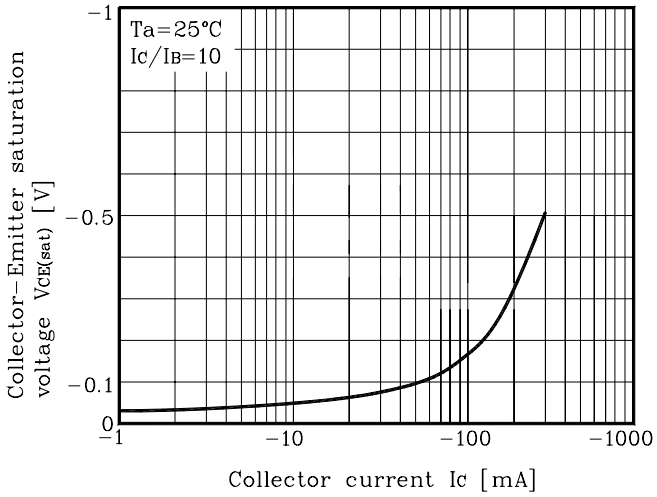
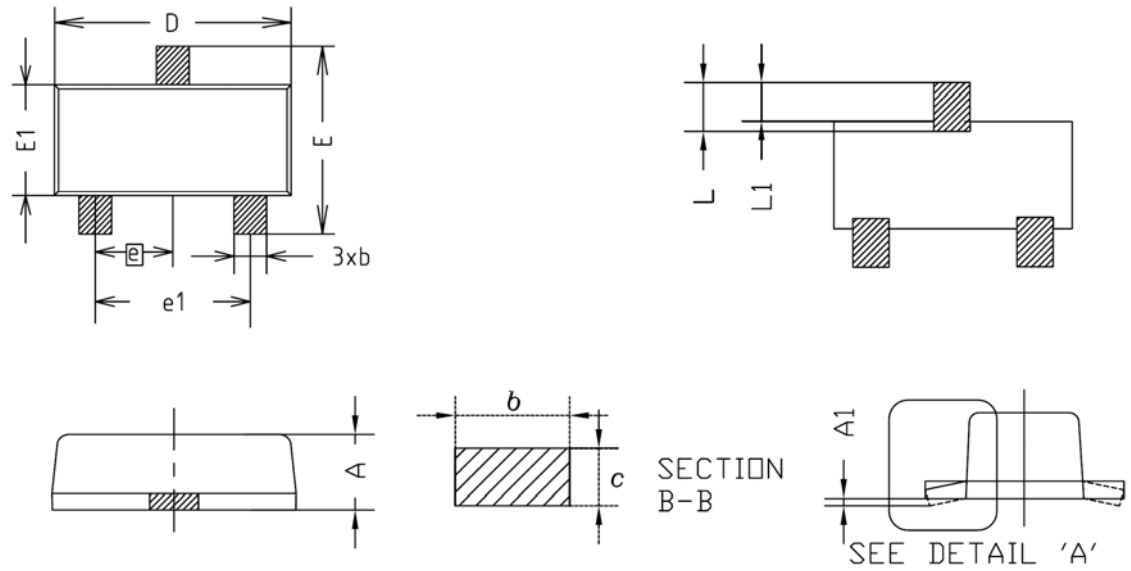


Fig. 3 $V_{CE(sat)}$-I_C

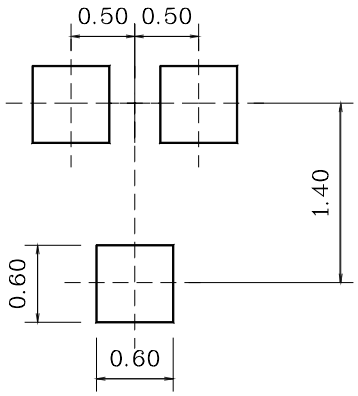


Outline Dimension



SYMBOL	MILLIMETERS			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A	0.63	0.68	0.73	
A1	0.00	–	0.10	
A2	–	–	–	
b	0.25	0.30	0.35	
c	0.04	0.11	0.20	
D	1.50	1.60	1.70	
E	1.50	1.60	1.70	
E1	0.78	0.88	0.98	
e	0.50BSC			
e1	0.90	–	1.10	
L	0.34	0.44	0.54	
L1	0.28	0.34	0.43	

※Recommend PCB solder land [Unit: mm]



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