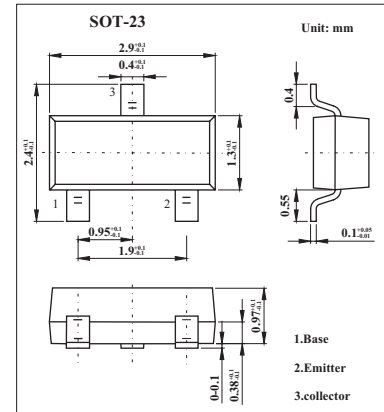


PNP Transistors

KMBT3906(MMBT3906)

■ Features

- Epitaxial planar die construction



■ Absolute Maximum Ratings Ta = 25°C

Parameter	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- Continuous	I_C	-0.2	A
Collector Dissipation	P_C	0.3	W
Junction and Storage Temperature	T_J, T_{stg}	-55 to 150	°C

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector - base breakdown voltage	V_{CBO}	$I_C = -100 \mu A, I_E = 0$	-40			V
Collector - emitter breakdown voltage	V_{CEO}	$I_C = -1 \text{ mA}, I_B = 0$	-40			V
Emitter- base breakdown voltage	V_{EBO}	$I_E = -100 \mu A, I_C = 0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB} = -40 \text{ V}, I_E = 0$			-0.1	μA
Collector cut-off current	I_{CEO}	$V_{CE} = -40 \text{ V}, V_{BE(off)} = -3 \text{ V}$			-50	nA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5 \text{ V}, I_C = 0$			-0.1	μA
DC current gain	h_{FE}	$V_{CE} = -1 \text{ V}, I_C = -10 \text{ mA}$	100		300	
		$V_{CE} = -1 \text{ V}, I_C = -50 \text{ mA}$	60			
Collector- emitter saturation voltage	$V_{CE(sat)}$	$I_C = -50 \text{ mA}, I_B = -5 \text{ mA}$			-0.3	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = -50 \text{ mA}, I_B = -5 \text{ mA}$			-0.95	V
Delay time	t_d	$V_{CC} = -3.0 \text{ V}, V_{BE} = 0.5 \text{ V}$			35	ns
Rise time	t_r	$I_C = -10 \text{ mA}, I_{B1} = -1.0 \text{ mA}$			35	
Storage time	t_s	$V_{CC} = -3.0 \text{ V}, I_C = -10 \text{ mA}$			225	ns
Fall time	t_f	$I_{B1} = I_{B2} = -1.0 \text{ mA}$			75	
Transition frequency	f_T	$V_{CE} = -20 \text{ V}, I_C = -10 \text{ mA}, f = 100 \text{ MHz}$	250			MHz

■ Marking

Marking	2A
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KMBT3906(MMBT3906)

■ Typical Characteristics

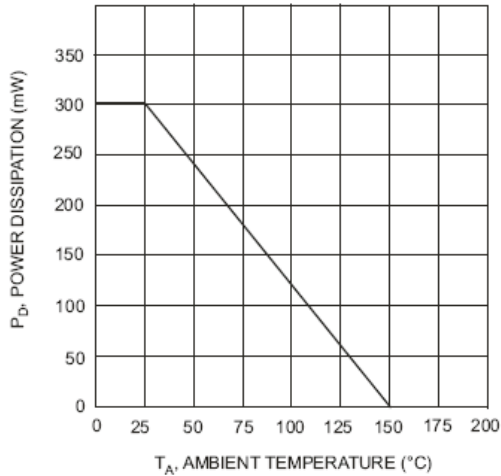


Fig.1 Max Power Dissipation vs Ambient Temperature

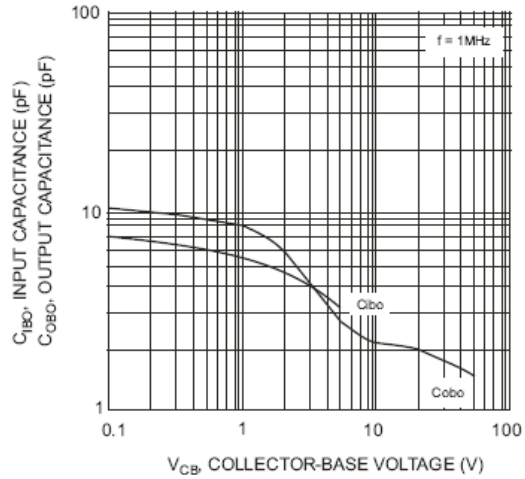


Fig.2 Input and Output Capacitance vs. Collector-Base Voltage

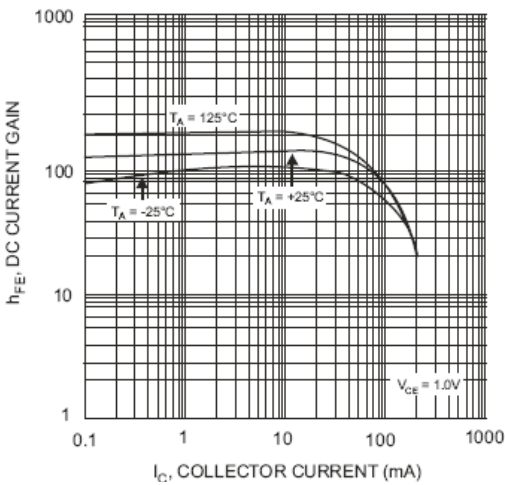


Fig.3 Typical DC Current Gain vs Collector Current

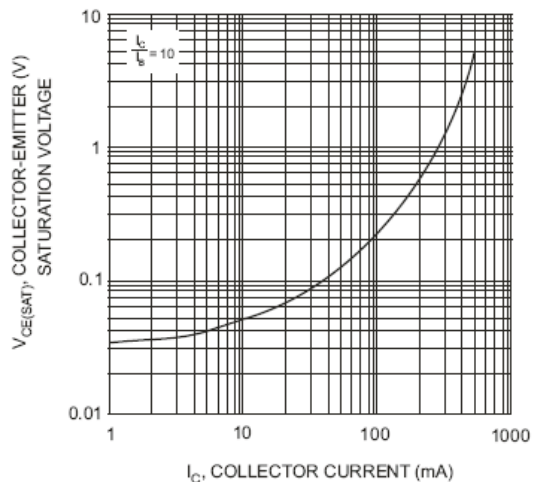


Fig.4 Typical Collector-Emitter Saturation Voltage vs. Collector Current

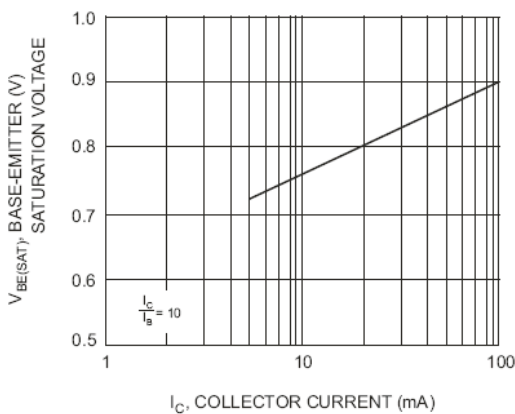


Fig.5 Typical Base-Emitter Saturation Voltage vs. Collector Current