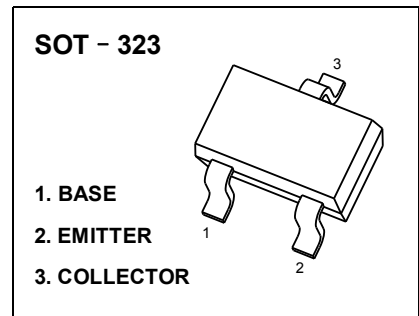


**MMBT3906W TRANSISTOR(PNP)**

for switching and amplifier applications



**MAXIMUM RATINGS (T<sub>A</sub>=25°C unless otherwise noted)**

Parameter	Symbol	Value	Unit
Collector Base Voltage	-V <sub>CB0</sub>	40	V
Collector Emitter Voltage	-V <sub>CEO</sub>	40	V
Emitter Base Voltage	-V <sub>EBO</sub>	5	V
Collector Current	-I <sub>C</sub>	200	mA
Total Power Dissipation	P <sub>tot</sub>	200	mW
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature Range	T <sub>stg</sub>	- 55 to +150	°C

**Characteristics at  $T_a = 25\text{ }^\circ\text{C}$** 

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at $-V_{CE} = 1\text{ V}$ , $-I_C = 0.1\text{ mA}$	$h_{FE}$	60	-	-
at $-V_{CE} = 1\text{ V}$ , $-I_C = 1\text{ mA}$	$h_{FE}$	80	-	-
at $-V_{CE} = 1\text{ V}$ , $-I_C = 10\text{ mA}$	$h_{FE}$	100	300	-
at $-V_{CE} = 1\text{ V}$ , $-I_C = 50\text{ mA}$	$h_{FE}$	60	-	-
at $-V_{CE} = 1\text{ V}$ , $-I_C = 100\text{ mA}$	$h_{FE}$	30	-	-
Collector Emitter Cutoff Current at $-V_{CE} = 30\text{ V}$	$-I_{CES}$	-	50	nA
Emitter Base Cutoff Current at $-V_{EB} = 3\text{ V}$	$-I_{EBO}$	-	50	nA
Collector Base Breakdown Voltage at $-I_C = 10\text{ }\mu\text{A}$	$-V_{(BR)CBO}$	40	-	V
Collector Emitter Breakdown Voltage at $-I_C = 1\text{ mA}$	$-V_{(BR)CEO}$	40	-	V
Emitter Base Breakdown Voltage at $-I_E = 10\text{ }\mu\text{A}$	$-V_{(BR)EBO}$	5	-	V
Collector Emitter Saturation Voltage at $-I_C = 10\text{ mA}$ , $-I_B = 1\text{ mA}$	$-V_{CE(sat)}$	-	0.25	V
at $-I_C = 50\text{ mA}$ , $-I_B = 5\text{ mA}$		-	0.4	
Base Emitter Saturation Voltage at $-I_C = 10\text{ mA}$ , $-I_B = 1\text{ mA}$	$-V_{BE(sat)}$	0.65	0.85	V
at $-I_C = 50\text{ mA}$ , $-I_B = 5\text{ mA}$		-	0.95	
Transition Frequency at $-V_{CE} = 20\text{ V}$ , $I_E = 10\text{ mA}$ , $f = 100\text{ MHz}$	$f_T$	250	-	MHz
Collector Output Capacitance at $-V_{CB} = 10\text{ V}$ , $f = 100\text{ KHz}$	$C_{ob}$	-	4.5	pF
Delay Time at $-V_{CC} = 3\text{ V}$ , $-V_{BE(OFF)} = 0.5\text{ V}$ , $-I_C = 10\text{ mA}$ , $-I_{B1} = 1\text{ mA}$	$t_d$	-	35	ns
Rise Time at $-V_{CC} = 3\text{ V}$ , $-V_{BE(OFF)} = 0.5\text{ V}$ , $-I_C = 10\text{ mA}$ , $-I_{B1} = 1\text{ mA}$	$t_r$	-	35	ns
Storage Time at $-V_{CC} = 3\text{ V}$ , $-I_C = 10\text{ mA}$ , $I_{B1} = -I_{B2} = -1\text{ mA}$	$t_{stg}$	-	225	ns
Fall Time at $-V_{CC} = 3\text{ V}$ , $-I_C = 10\text{ mA}$ , $I_{B1} = -I_{B2} = -1\text{ mA}$	$t_f$	-	75	ns

### Typical Characteristics

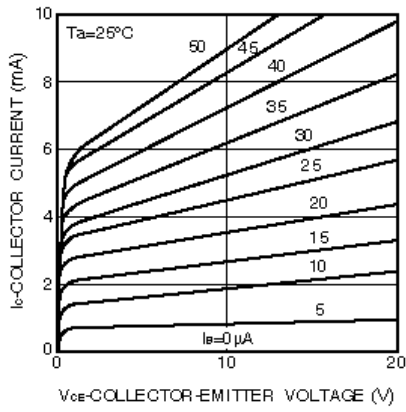


Fig.1 Grounded emitter output characteristics

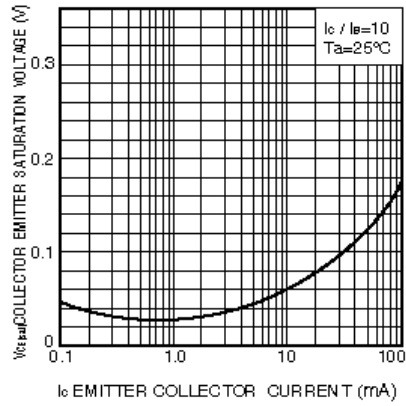


Fig.2 Collector-emitter saturation voltage vs. collector current

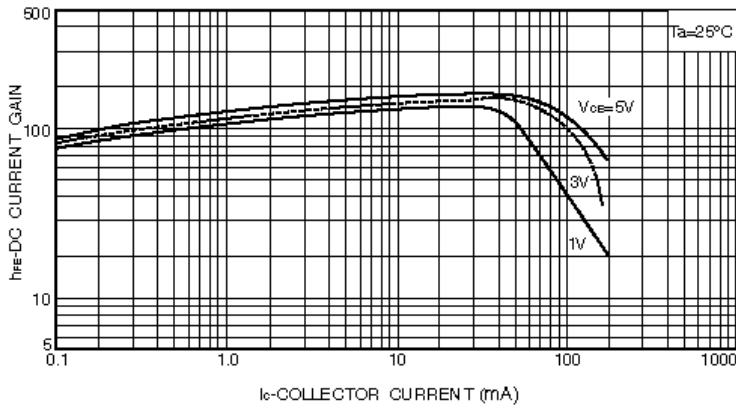


Fig.3 DC current gain vs. collector current ( I )

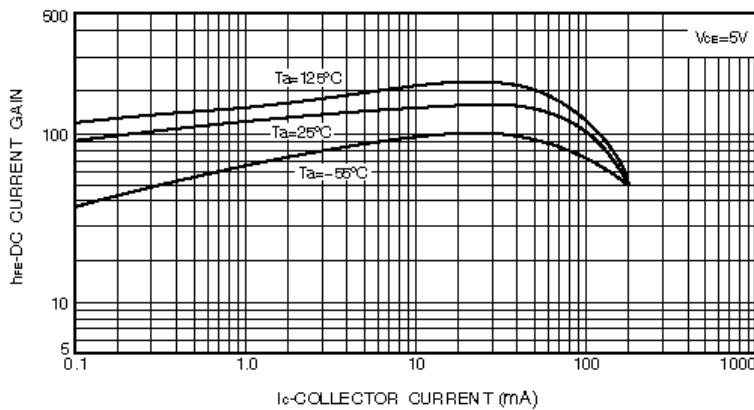


Fig.4 DC current gain vs. collector current ( II )

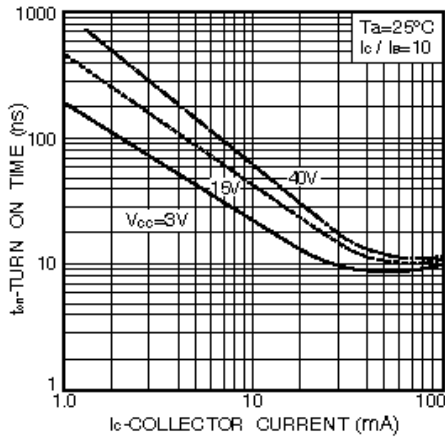


Fig. 8 Turn-on time vs. collector current

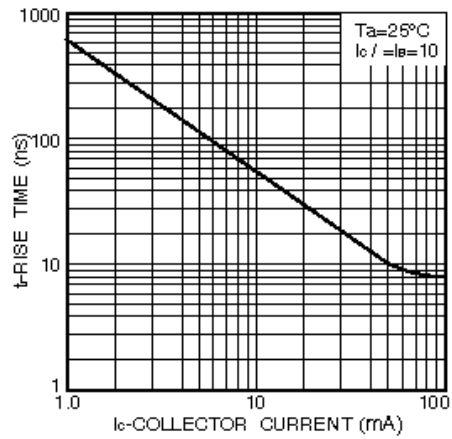


Fig. 9 Rise time vs. collector current

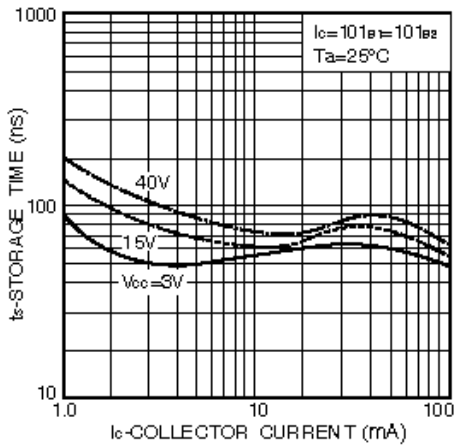


Fig. 10 Storage time vs. collector current

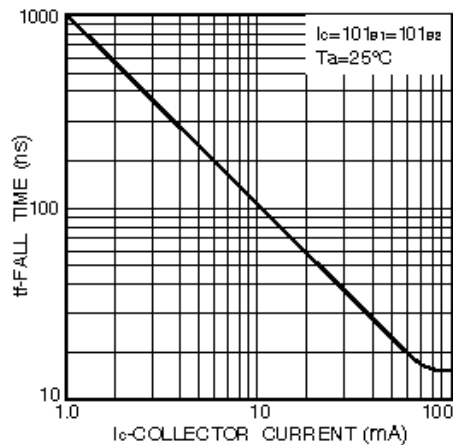


Fig. 11 Fall time vs. collector current

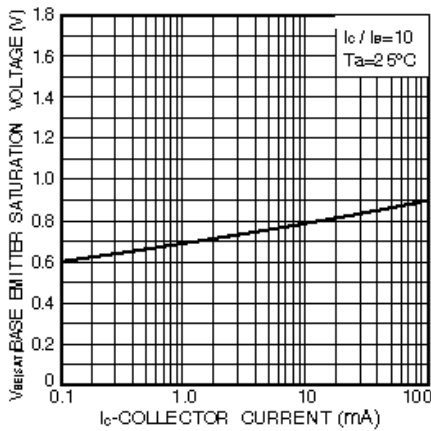


Fig. 6 Base-emitter saturation voltage vs. collector current

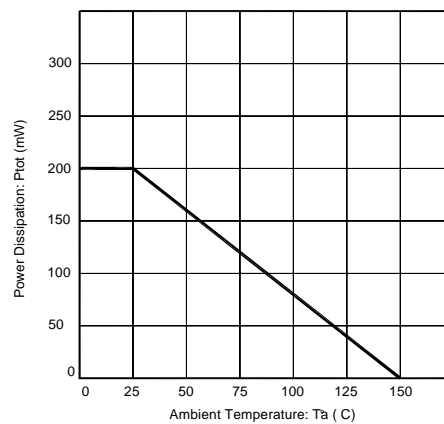
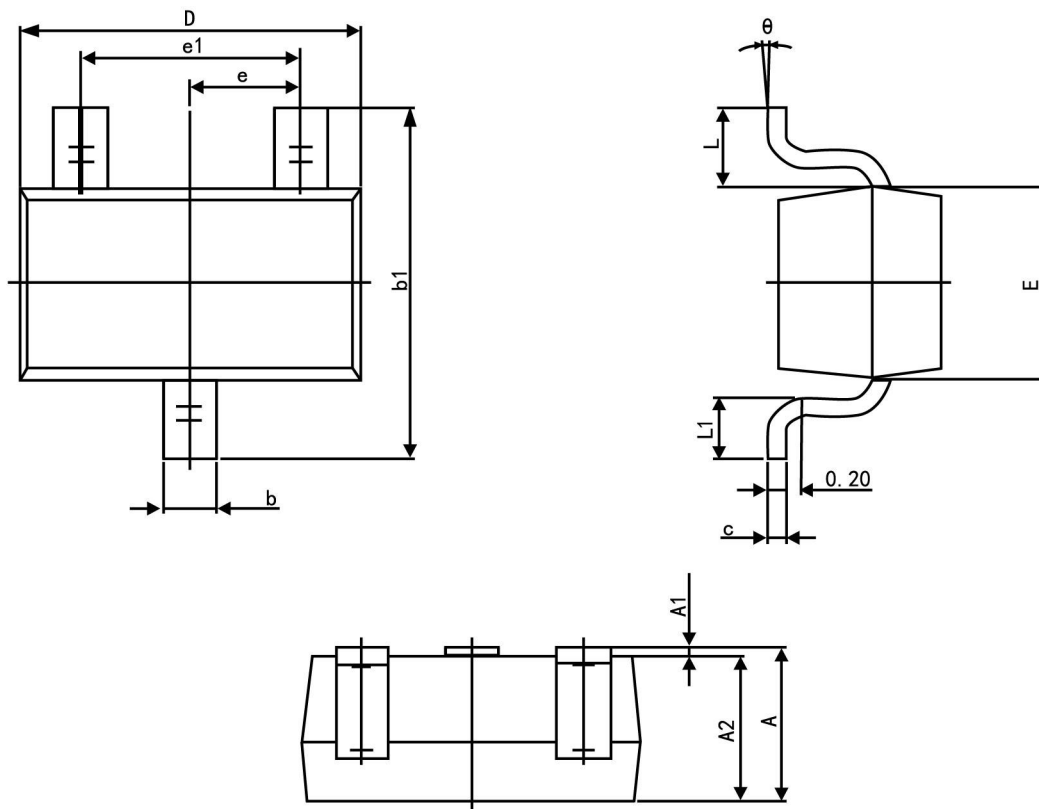


Fig. 10 Power Dissipation vs. Ambient Temperature

**PACKAGE OUTLINE**

Plastic surface mounted package; 3 leads

SOT-323



Symbol	Dimension in Millimeters	
	Min	Max
A	0.900	1.100
A1	0.000	0.100
A2	0.900	1.000
b	0.200	0.400
c	0.080	0.150
D	2.000	2.200
E	1.150	1.350
E1	2.150	2.450
e	0.650 TYP.	
e1	1.200	1.400
L	0.525 REF.	
L1	0.260	0.460
theta	0°	8°

单击下面可查看定价，库存，交付和生命周期等信息

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