



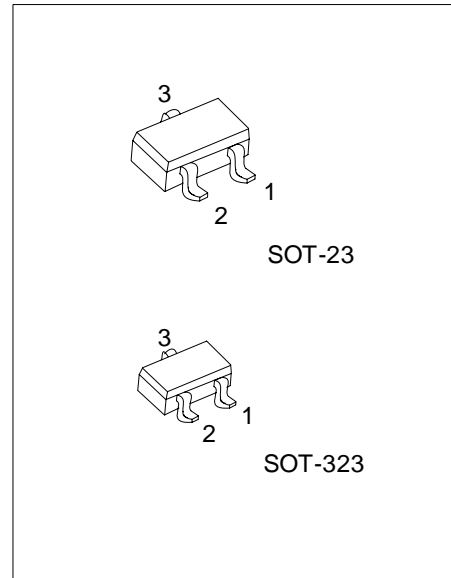
MMBT3906

PNP PLANAR TRANSISTOR

GENERAL PURPOSE APPLICATION

■ FEATURES

- * Collector-Emitter Voltage: $V_{CEO}=40V$
- * Collector Dissipation: $P_{C(MAX)}=350mW$
- * Complementary to MMBT3904



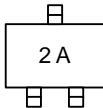
*Pb-free plating product number: MMBT3906L

■ ORDERING INFORMATION

Order Number		Package	Pin Assignment			Packing
Normal	Lead Free Plating		1	2	3	
MMBT3906-AE3-R	MMBT3906L-AE3-R	SOT-23	E	B	C	Tape Reel
MMBT3906-AL3-R	MMBT3906L-AL3-R	SOT-323	E	B	C	Tape Reel

<p>MMBT3906L-AE3-R</p>	<p>(1) R: Tape Reel (2) AE3: SOT-23, AL3: SOT-323 (3) L: Lead Free Plating, Blank: Pb/Sn</p>
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■ MARKING



■ ABSOLUTE MAXIMUM RATING (Ta=25 , unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	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
Base Current	I _B	-50	mA
Collector dissipation	P _C	350	mW
Junction Temperature	T _J	150	
Storage Temperature	T _{STG}	-55 ~ +150	

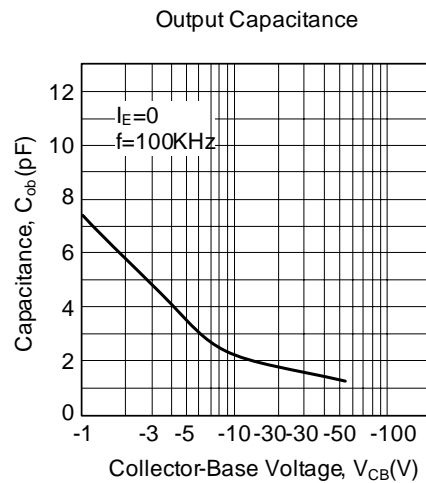
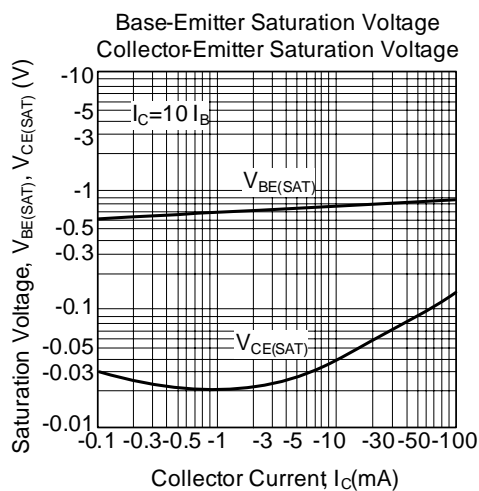
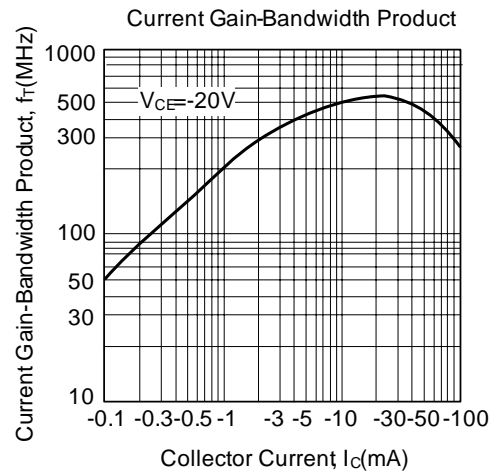
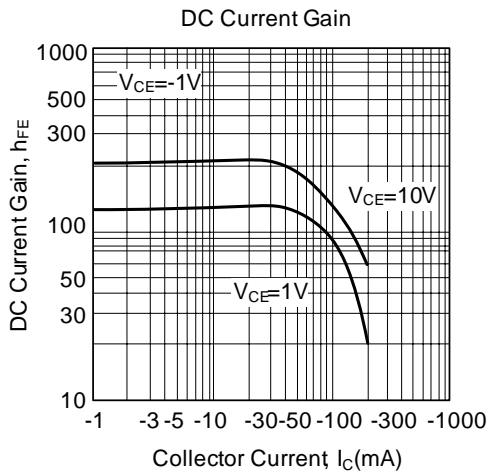
Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS (Ta=25 , unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Cut-off Current	I _{CEX}	V _{CE} =-30V, V _{EB} =-3V			-50	nA
Base Cut-off Current	I _{BL}	V _{CE} =-30V, V _{EB} =-3V			-50	nA
Collector-Base Breakdown Voltage	V _{CBO}	I _C =-10μA, I _E =0	-40			V
Collector-Emitter Breakdown Voltage (Note)	V _{CEO}	I _C =-1mA, I _B =0	-40			V
Emitter-Base Breakdown Voltage	V _{EBO}	I _E =-10μA, I _C =0	-6			V
DC Current Gain (Note)	h _{FE1}	V _{CE} =-1V, I _C =-0.1mA	60			
	h _{FE2}	V _{CE} =-1V, I _C =-1mA	80			
	h _{FE3}	V _{CE} =-1V, I _C =-10mA	100		300	
	h _{FE4}	V _{CE} =-1V, I _C =-50mA	60			
	h _{FE5}	V _{CE} =-1V, I _C =-100mA	30			
Collector-Emitter Saturation Voltage (Note)	V _{CE(SAT)1}	I _C =-10mA, I _B =-1mA			-0.25	V
	V _{CE(SAT)2}	I _C =-50mA, I _B =-5mA			-0.4	V
Base-Emitter Saturation Voltage	V _{BE(SAT)1}	I _C =-10mA, I _B =-1mA	-0.65		-0.85	V
	V _{BE(SAT)2}	I _C =-50mA, I _B =-5mA			-0.95	V
Transition Voltage	f _T	V _{CE} =-20V, I _C =-10mA, f=100MHz	250			MHz
Output Capacitance	C _{ob}	V _{CB} =-5V, I _E =0, f=1MHz			4.5	pF
Turn on Time	t _{ON}	V _{CC} =-3V, V _{BE} =-0.5V, I _C =-10mA, I _{B1} =-1mA			70	ns
Turn off Time	t _{OFF}	I _{B1} =I _{B2} =-1mA			300	ns

Note: Pulse test: PW 300μs, Duty Cycle 2%

TYPICAL CHARACTERISTICS



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