

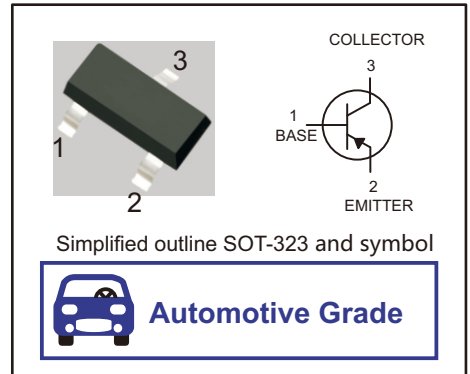
## PNP TRANSISTOR

### FEATURES

- As complementary type, the NPN transistor
- MMBT3904WG is Recommended
- Epitaxial planar die construction
- Qualified to AEC-Q101 Standards for High Reliability

### PINNING

PIN	DESCRIPTION
1	BASE
2	EMITTER
3	COLLECTOR



### MAXIMUM RATINGS (Ta=25°C unless otherwise noted)

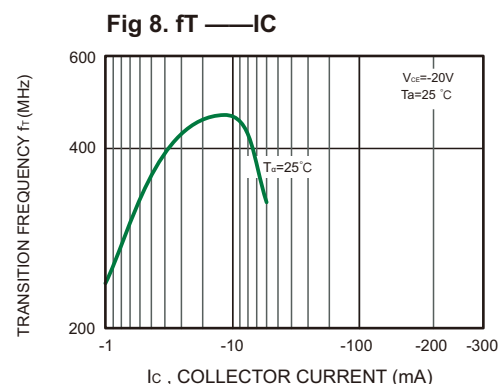
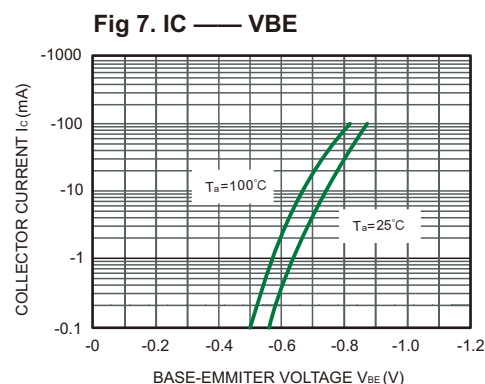
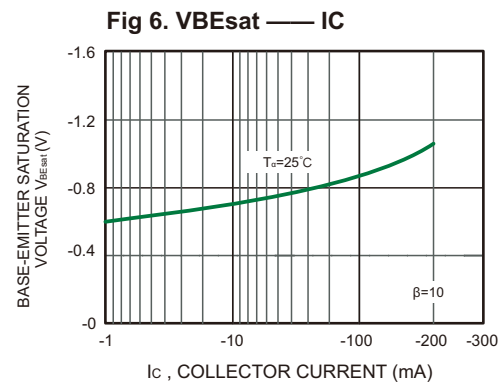
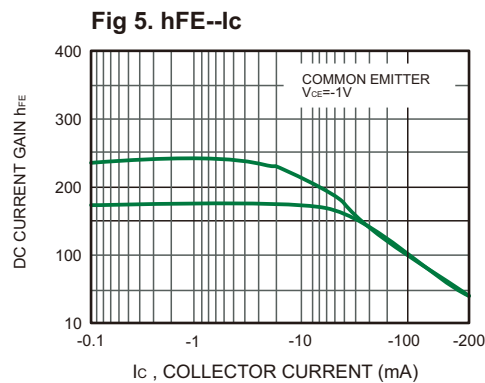
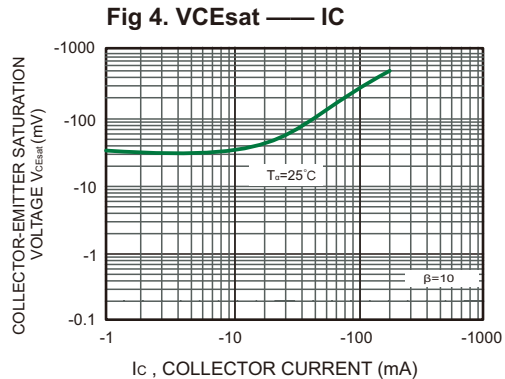
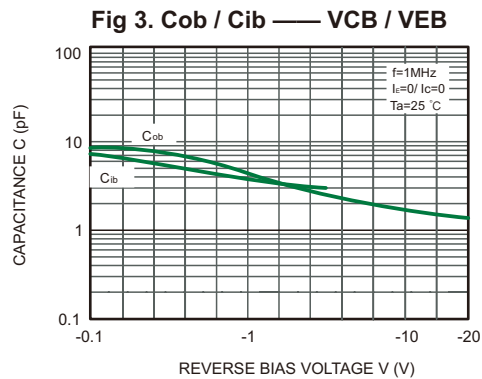
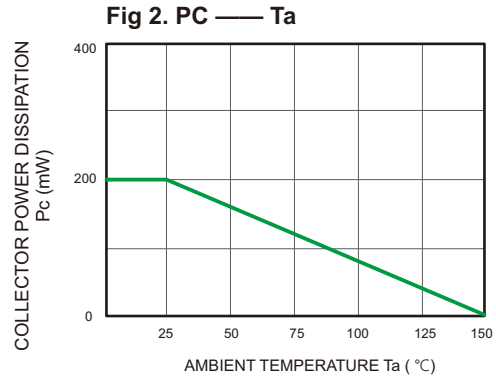
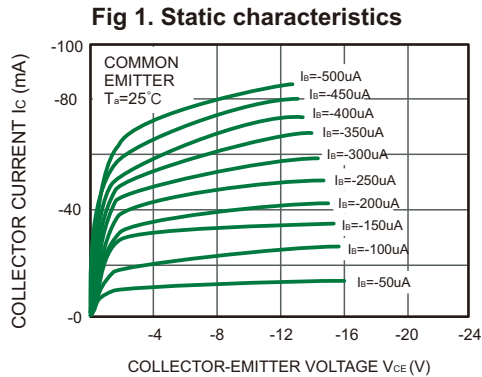
Parameter	Symbol	Value	Unit
Collector–Base Voltage	V <sub>CB0</sub>	-40	V
Collector–Emitter Voltage	V <sub>CEO</sub>	-40	V
Emitter–Base Voltage	V <sub>EBO</sub>	-5	V
Collector Current — Continuous	I <sub>c</sub>	-200	mA
Collector Dissipation	P <sub>c</sub>	0.2	W
Thermal Resistance From Junction To Ambient	R <sub>θJA</sub>	625	°C/W
Operation Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>stg</sub>	-55~+150	°C

### ELECTRICAL CHARACTERISTICS (TA = 25°C unless otherwise noted.)

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>c</sub> = -10μA, I <sub>E</sub> = 0	-40		V
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>c</sub> = -1 mA, I <sub>B</sub> = 0	-40		V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> = -10μA, I <sub>c</sub> = 0	-5		V
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> = -40V, I <sub>E</sub> = 0		-100	nA
Collector cut-off current	I <sub>CEx</sub>	V <sub>CE</sub> = -30V, V <sub>EB</sub> = -3V		-50	nA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> = -5V, I <sub>c</sub> = 0		-100	nA
DC current gain	h <sub>FE1</sub>	V <sub>CE</sub> = -1V, I <sub>c</sub> = -10mA	100	300	
	h <sub>FE2</sub>	V <sub>CE</sub> = -1V, I <sub>c</sub> = -50mA	60		
	h <sub>FE3</sub>	V <sub>CE</sub> = -2V, I <sub>c</sub> = -100mA	30		
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>c</sub> = -50mA, I <sub>B</sub> = -5mA		-0.3	V
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>c</sub> = -50mA, I <sub>B</sub> = -5mA		-0.95	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = -20V, I <sub>c</sub> = -10mA, f = 100MHz	300		MHZ
Delay time	t <sub>d</sub>	V <sub>CC</sub> = -3V, V <sub>BE</sub> = 0.5V I <sub>c</sub> = -10mA, I <sub>B1</sub> = I <sub>B2</sub> = -1mA		35	ns
Rise time	t <sub>r</sub>			35	ns
Storage time	t <sub>s</sub>	V <sub>CC</sub> = -3V, I <sub>c</sub> = -10mA I <sub>B1</sub> = I <sub>B2</sub> = -1mA		225	ns
Fall time	t <sub>f</sub>			75	ns

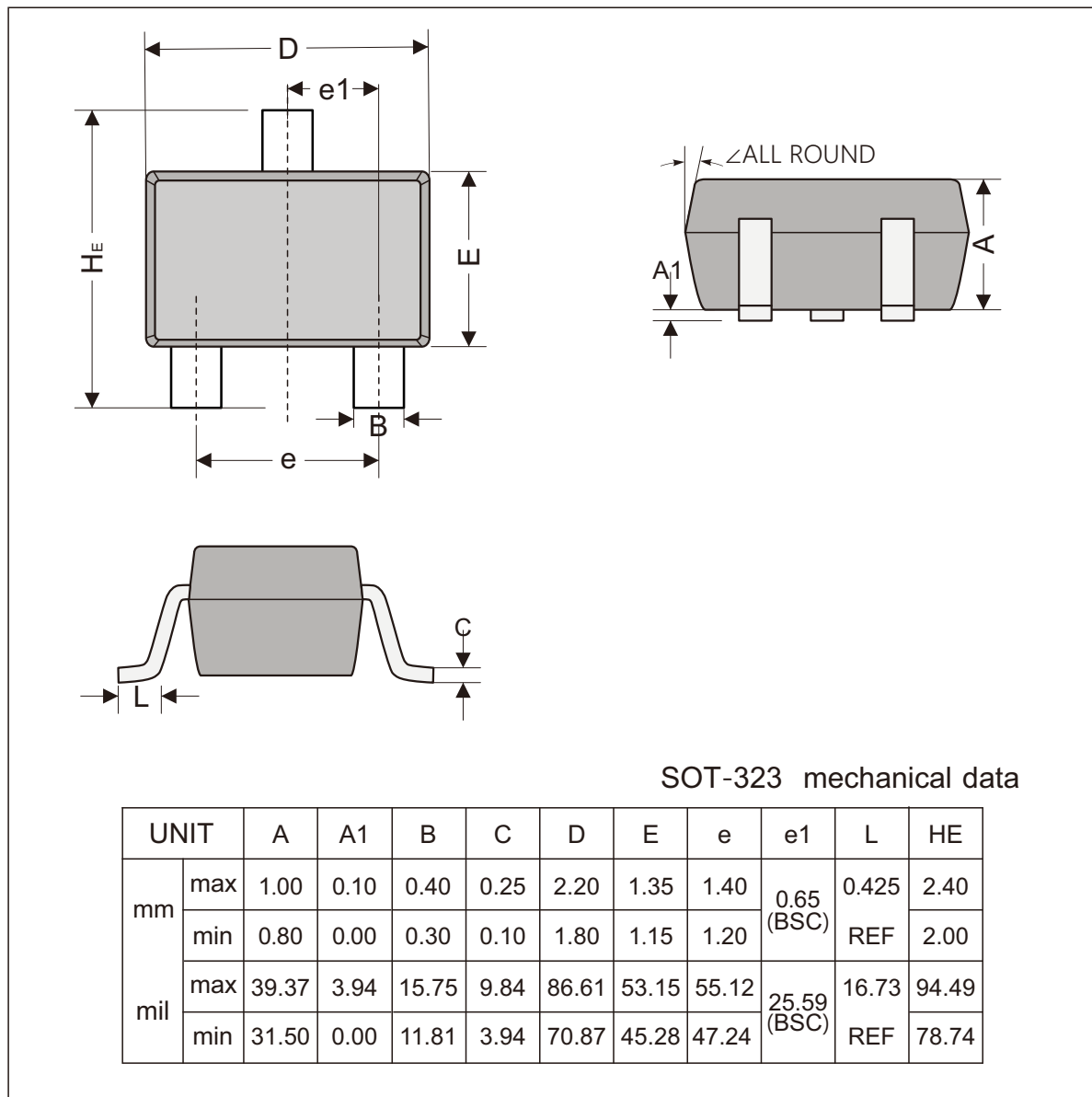


### Typical Performance Characteristics

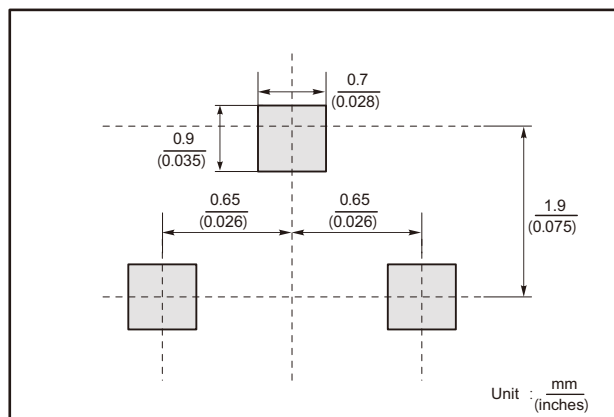




SOT-323 Package Outline Dimensions



The recommended mounting pad size



Marking

Type number	Marking code
MMBT3906WG	2A



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