

**AT-MMBT2907A**

**PNP TRANSISTOR**

**FEATURES**

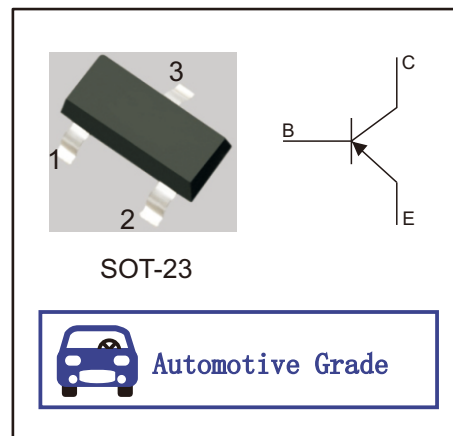
- Epitaxial planar die construction
- Complementary NPN Type available(AT-MMBT2222A)
- Qualified to AEC-Q101 Standards for High Reliability

**PINNING**

PIN	SYMBOL	DESCRIPTION
1	B	BASE
2	E	EMITTER
3	C	COLLECTOR

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

Parameter	Symbol	Value	Unit
Collector-Base Voltage	$V_{CBO}$	-60	V
Collector-Emitter Voltage	$V_{CEO}$	-60	V
Emitter-Base Voltage	$V_{EBO}$	-5	V
Collector Current — Continuous	$I_C$	-600	mA
Total Device Dissipation	$P_D$	250	mW
Thermal Resistance From Junction To Ambient	$R_{thJA}$	500	°C/W
Operation Junction and Storage Temperature Range	$T_J, T_{stg}$	-55~+150	°C



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

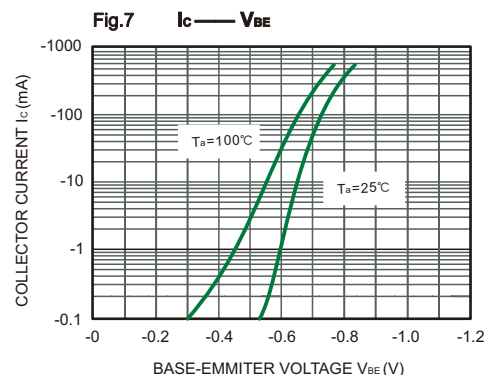
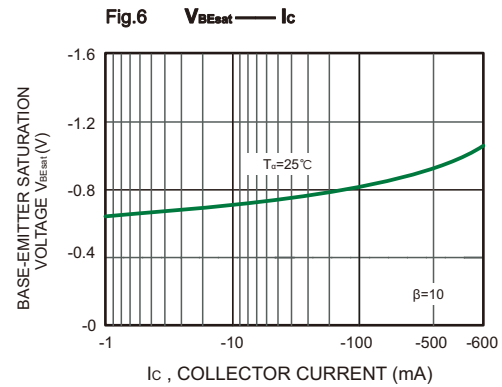
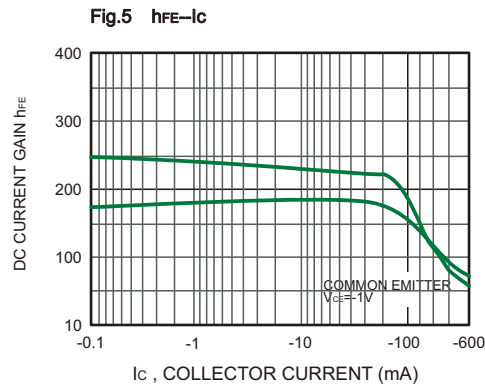
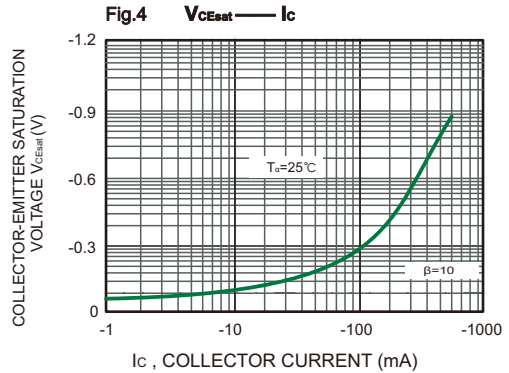
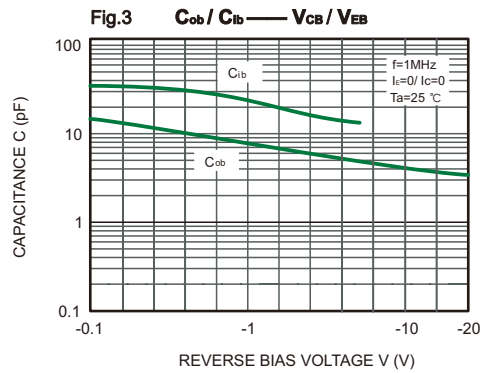
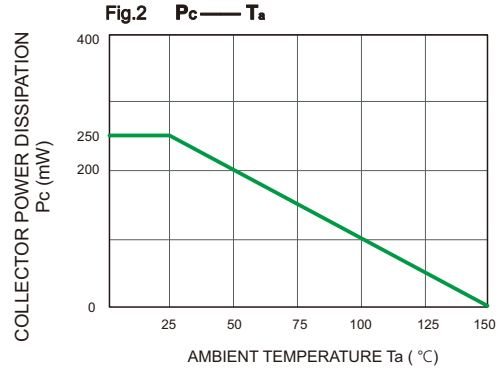
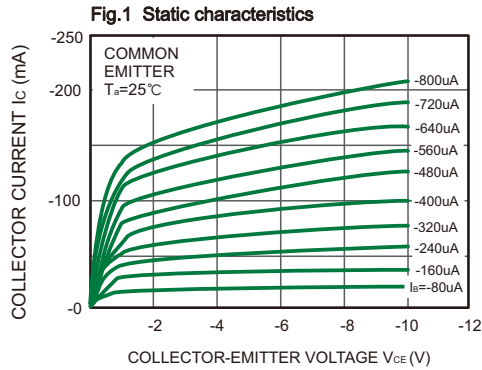
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -10\mu A, I_E = 0$	-60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -10mA, I_B = 0$	-60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -10\mu A, I_C = 0$	-5			V
Collector cut-off current	$I_{CBO}$	$V_{CB} = -50V, I_E = 0$			-20	nA
Base cut-off current	$I_{EBO}$	$V_{EB} = -3V, I_C = 0$			-10	nA
Collector cut-off current	$I_{CEX}$	$V_{CE} = -30V, V_{BE} = -0.5V$			-50	nA
DC current gain	$h_{FE1}$	$V_{CE} = -10V, I_C = -150mA$	100		300	
	$h_{FE2}$	$V_{CE} = -10V, I_C = -0.1mA$	75			
	$h_{FE3}$	$V_{CE} = -10V, I_C = -1mA$	100			
	$h_{FE4}$	$V_{CE} = -10V, I_C = -10mA$	100			
	$h_{FE5}$	$V_{CE} = -10V, I_C = -500mA$	50			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -150mA, I_B = -15mA$			-0.4	V
	$V_{CE(sat)}$	$I_C = -500mA, I_B = -50mA$			-1.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -150mA, I_B = -15mA$			-1.3	V
	$V_{BE(sat)}$	$I_C = -500mA, I_B = -50mA$			-2.6	V
Transition frequency	$f_T$	$V_{CE} = -20V, I_C = -50mA, f = 100MHz$	200			MHz
Delay time	$t_d$	$V_{CE} = -30V, I_C = -150mA, I_{B1} = -15mA$			10	ns
Rise time	$t_r$				25	ns
Storage time	$t_s$	$V_{CE} = -6V, I_C = -150mA$			225	ns
Fall time	$t_f$	$I_{B1} = - I_{B2} = -15mA$			60	ns

**CLASSIFICATION OF  $h_{FE}(1)$**

HFE	100-300	
RANK	L	H
RANGE	100-200	200-300

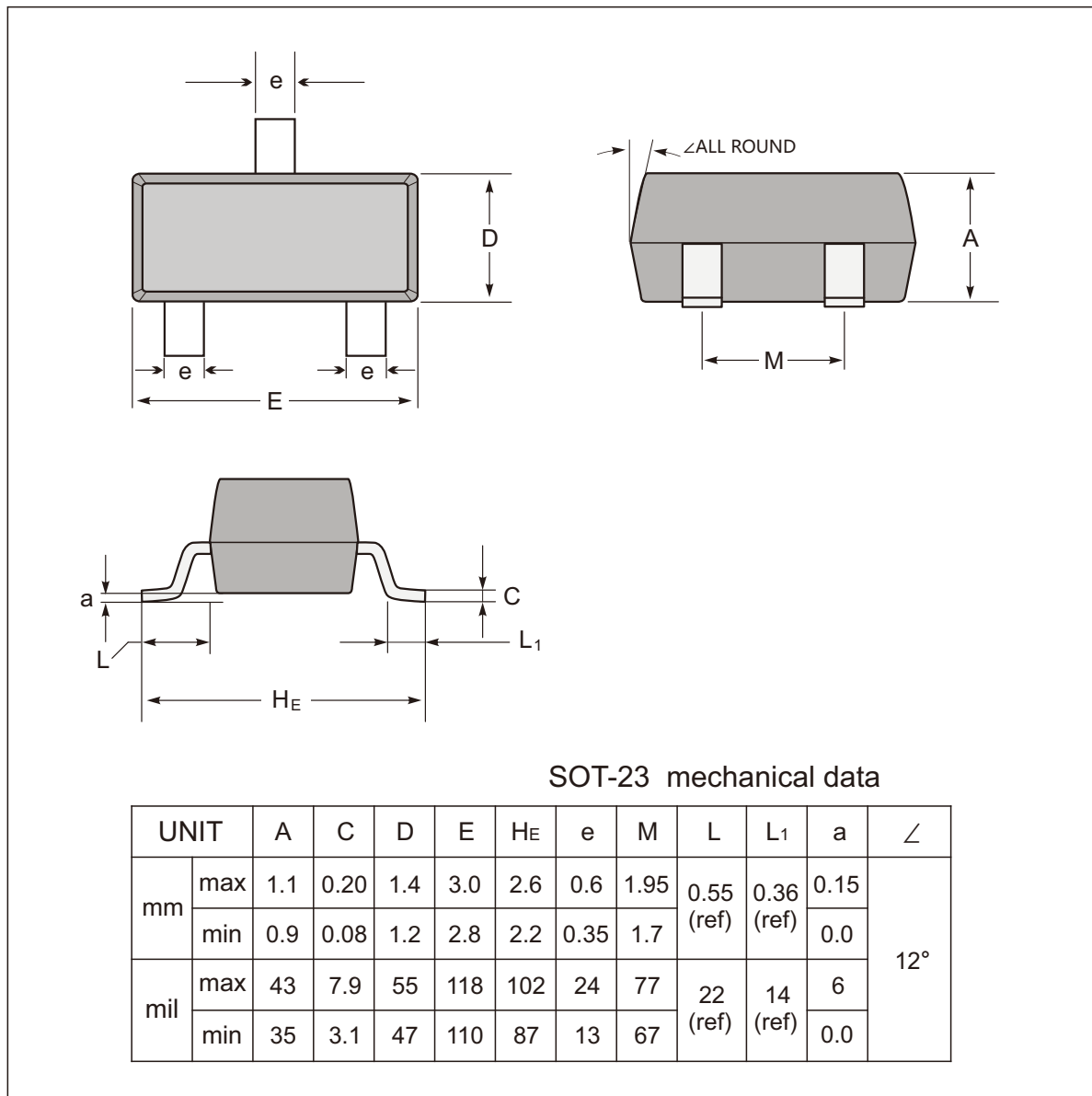


### TYPICAL CHARACTERISTICS

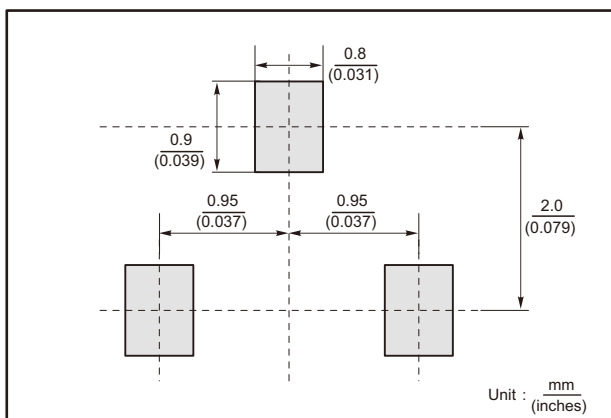




### SOT-23 Package Outline Dimensions



#### The recommended mounting pad size



#### Marking

Type number	Marking code
AT-MMBT2907A	2F