

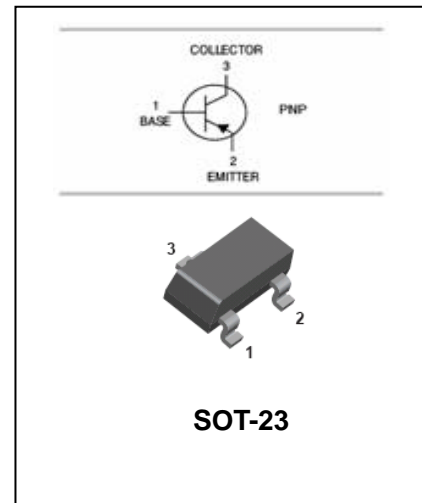
FEATURES

- Epitaxial planar die construction.
- Complementary NPN type available MMBT2222A.
- Ideal for medium power amplification and switching.



APPLICATIONS

- This device is designed as a general purpose amplifier and switching.
- The useful dynamic range extends to 600mA as a switch and to 100MHz as a amplifier.



ORDERING INFORMATION

Type No.	Marking	Package Code
MMBT2907A	2F	SOT-23

MAXIMUM RATING @ Ta=25°C unless otherwise specified

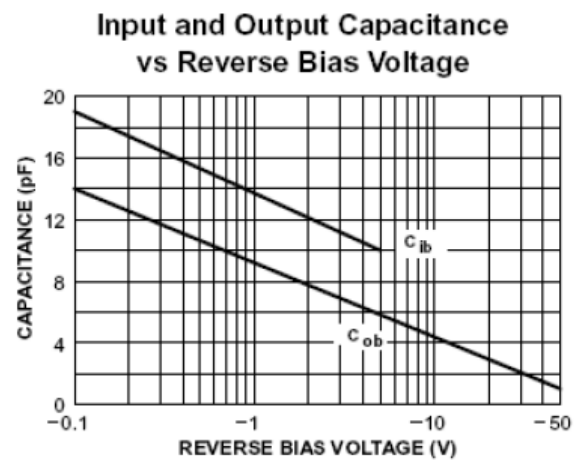
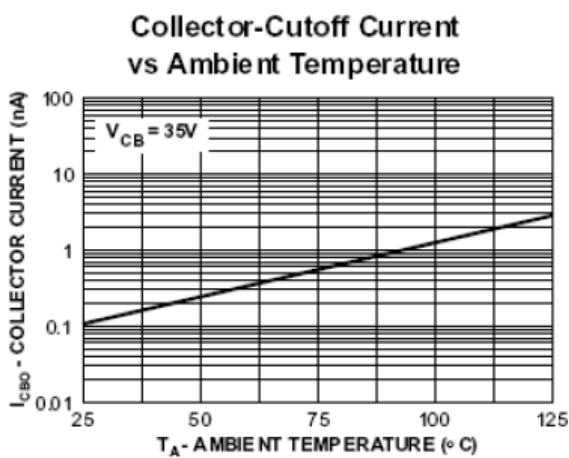
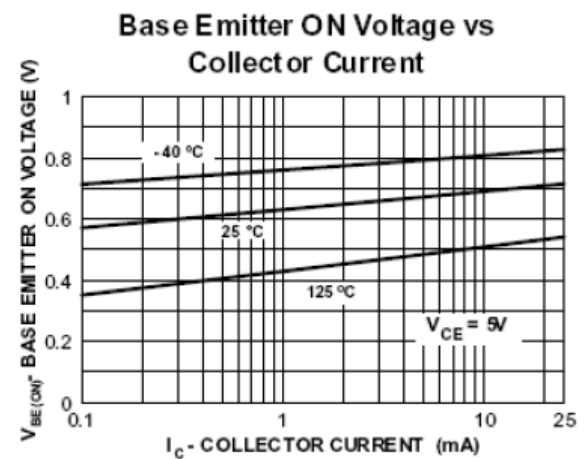
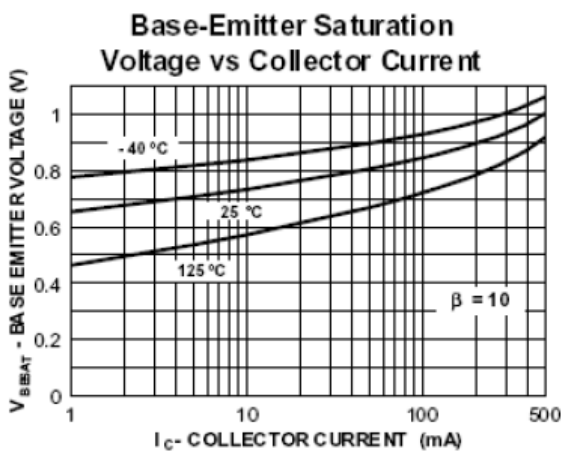
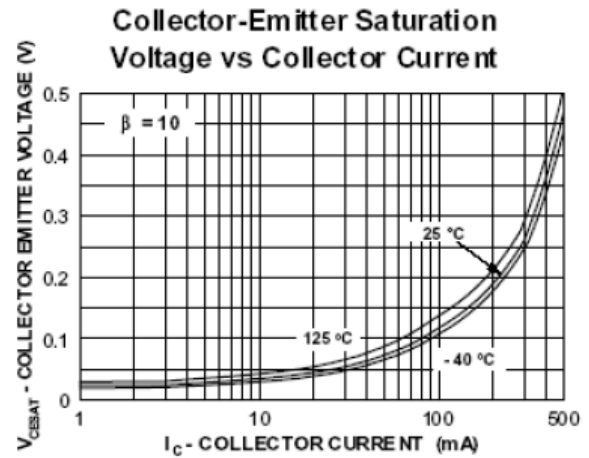
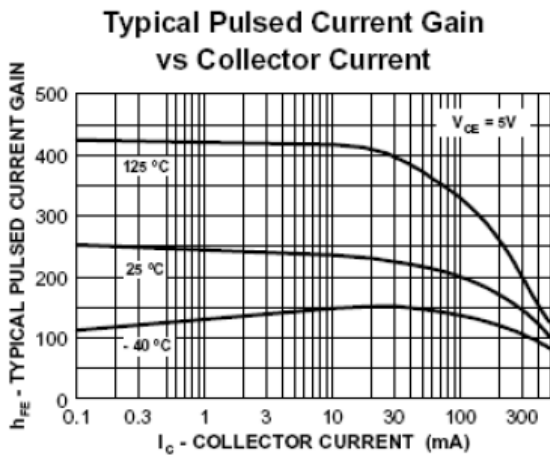
Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	-60	V
V _{CEO}	Collector-Emitter Voltage	-60	V
V _{EBO}	Emitter-Base Voltage	-5	V
I _C	Collector Current -Continuous	-600	mA
P _D	Total Device Dissipation	300	mW
R _{θJA}	Thermal Resistance Junction to Ambient	375	°C/W
T _j , T _{stg}	Junction and Storage Temperature	-55to+150	°C

These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

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			μV
Collector cut-off current	I_{CBO}	$V_{CB} = -50V$ $I_E = 0$			-0.1	μA
Collector cut-off current	I_{CEO}	$V_{CE} = -3V$ $I_B = 0$			-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{CE} = -3V$ $I_C = 0$			-0.1	μA
DC current gain	h_{FE}	$V_{CE} = -10V$ $I_C = -150mA$ $V_{CE} = -10V$ $I_C = -1mA$	100 50		300	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -500mA$ $I_B = -50mA$			-1	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -500mA$ $I_B = -50mA$			-2	V
Transition frequency	f_T	$V_{CE} = -20V$ $I_C = -50mA$ $f = 100MHz$	200			MHz
Delay time	t_d	$V_{CE} = -30V$, $I_C = -150mA$, $I_{B1} = -I_{B2} = -15mA$			10	ns
Rise time	t_r				40	ns
Storage time	t_s	$V_{CE} = -6V$, $I_C = -150mA$ $I_{B1} = -I_{B2} = -15mA$			80	ns
Fall time	t_f				30	ns

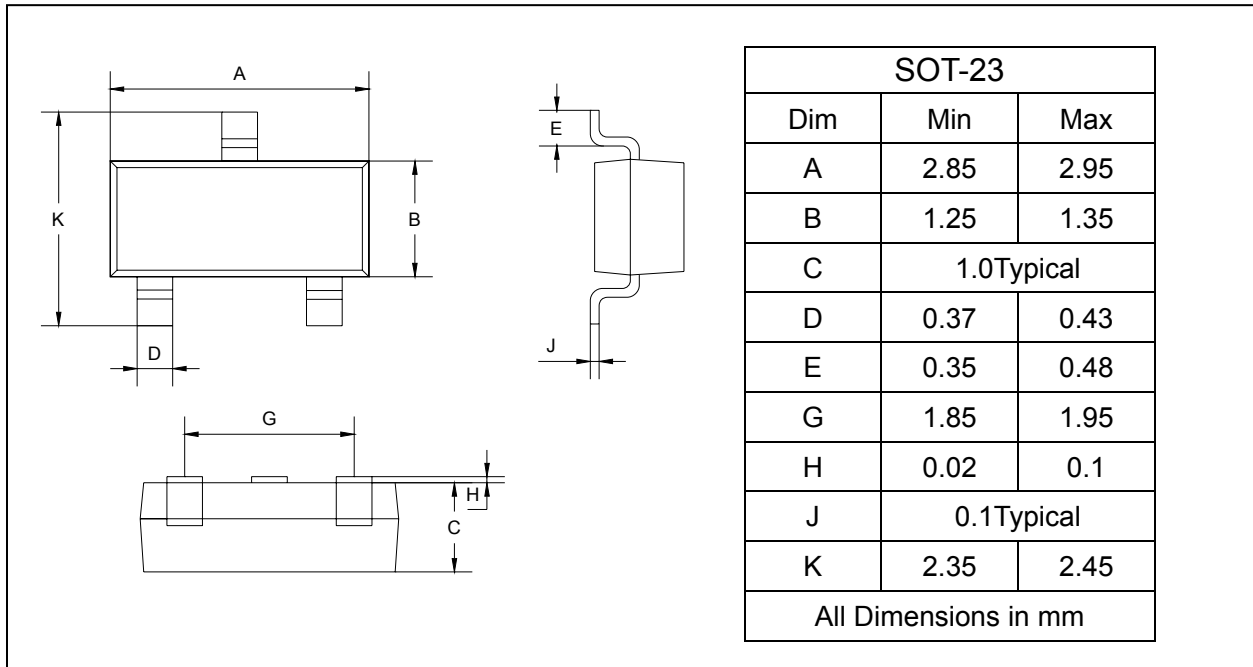
TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified



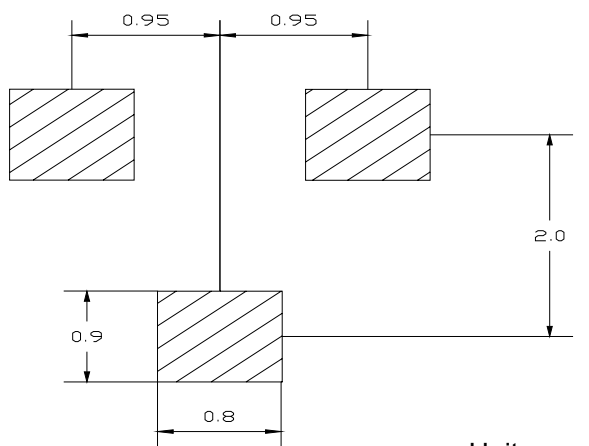
PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

Device	Package	Shipping
MMBT2907A	SOT-23	3000/Tape&Reel