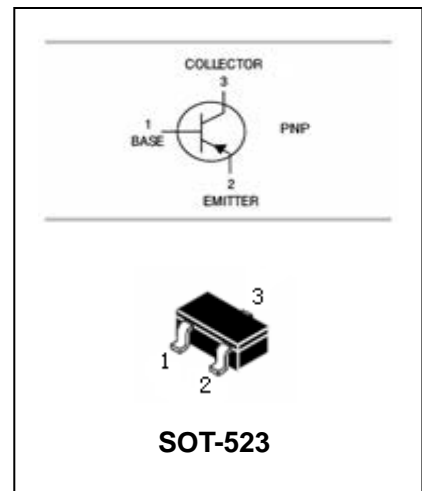


## PNP SMALL SIGNAL SURFACE MOUNT TRANSISTOR MMBT2907AT

### FEATURES

- Epitaxial planar die construction.
- Complementary NPN type available (MMBT2222AT).
- Ultra-Small Surface Mount Package.

HF



### ORDERING INFORMATION

Type No.	Marking	Package Code
MMBT2907AT	2F	SOT-523

### MAXIMUM RATING @ Ta=25°C unless otherwise specified

SYMBOL	PARAMETER	MMBT2907AT	UNIT
V <sub>CBO</sub>	collector-base voltage	-60	V
V <sub>CEO</sub>	collector-emitter voltage	-60	V
V <sub>EBO</sub>	emitter-base voltage	-5	V
I <sub>C</sub>	collector current (DC)	-600	mA
P <sub>d</sub>	Power dissipation	150	mW
R <sub>θJA</sub>	Thermal resistance, junction to Ambient	833	°C/W
T <sub>stg</sub>	storage temperature range	-55 to +150	°C
T <sub>j</sub>	junction temperature	150	°C

## PNP SMALL SIGNAL SURFACE MOUNT TRANSISTOR MMBT2907AT

### ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
$V_{(BR)CBO}$	Collector-base breakown voltage	$I_C=-10\mu A, I_E=0$	-60		
$V_{(BR)CEO}$	Collector- emitter breakown voltage	$I_C=-10mA, I_B=0$	-60		
$V_{(BR)BEO}$	Emitter-base breakown voltage	$I_E=-10\mu A, I_C=0$	-5		
$I_{CBO}$	Collector cut-off current	$I_E=0, V_{CB}=-50V$		-10	nA
		$I_E=0, V_{CB}=-50V, T_A=125^\circ C$		-10	$\mu A$
$I_{CEX}$	Collector cut-off current	$V_{CE}=-30V, V_{EB(OFF)}=-0.5V$		-50	nA
$I_{BL}$	Base cut-off current	$V_{CE}=-30V, V_{EB(OFF)}=-0.5V$		-50	nA
$h_{FE}$	DC current gain	$V_{CE}=-10V, I_C=-100\mu A$	75		
		$V_{CE}=-10V, I_C=-1mA$	100		
		$V_{CE}=-10V, I_C=-10mA$	100		
		$V_{CE}=-10V, I_C=-150mA$	100	300	
		$V_{CE}=-10V, I_C=-500mA$	50		
$V_{CE(sat)}$	collector-emitter saturation voltage	$I_C=-150mA, I_B=-15mA$		-0.4	V
		$I_C=-500mA, I_B=-50mA$		-1.6	V
$V_{BE(sat)}$	base-emitter saturation voltage	$I_C=-150mA; I_B=-15mA$		-1.3	V
		$I_C=-500mA; I_B=-50mA$		-2.6	V
$C_{obo}$	Output capacitance	$I_E=0, V_{CB}=-10V, f=1MHz$		8.0	pF
$C_{ibo}$	Input capacitance	$I_C=0, V_{BE}=-2V, f=1MHz$		30	pF
$f_T$	transition frequency	$I_C=-50mA, V_{CE}=-20V, f=100MHz$	200		MHz
$t_d$	Delay time	$I_C=-150mA, I_{B1}=-15mA, V_{CC}=-30V$	-	10	ns
$t_r$	Rise time		-	40	ns
$t_s$	Storage time	$V_{CC}=-6.0V, I_C=-150mA$	-	225	ns
$t_f$	Fall time	$I_{B1}=I_{B2}=-15mA$	-	60	ns

**PNP SMALL SIGNAL SURFACE MOUNT TRANSISTOR MMBT2907AT**

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

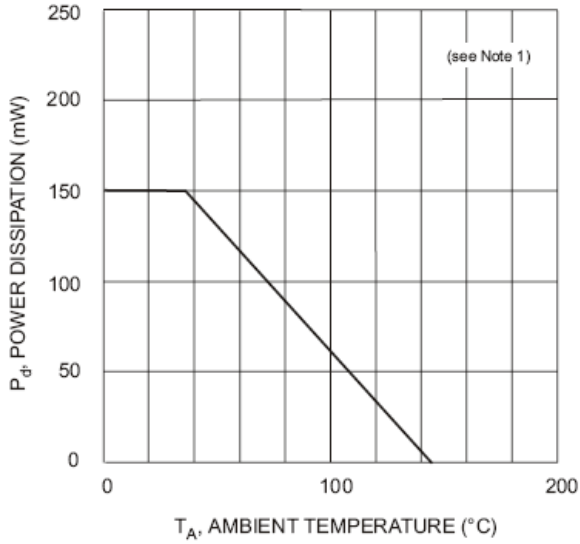


Fig. 1, Power Derating Curve

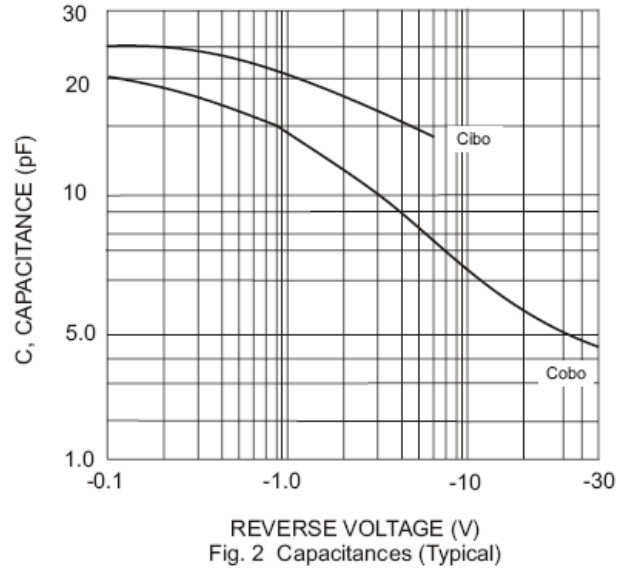


Fig. 2 Capacitances (Typical)

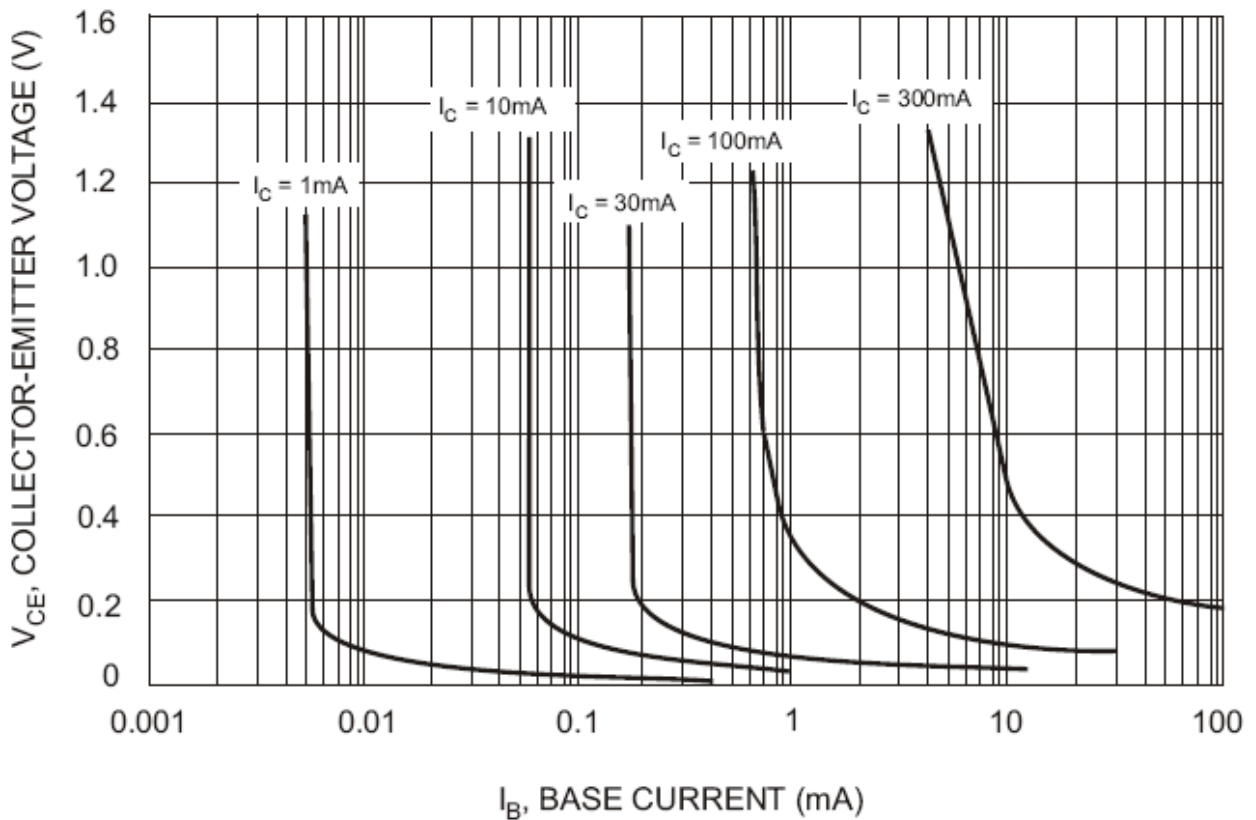


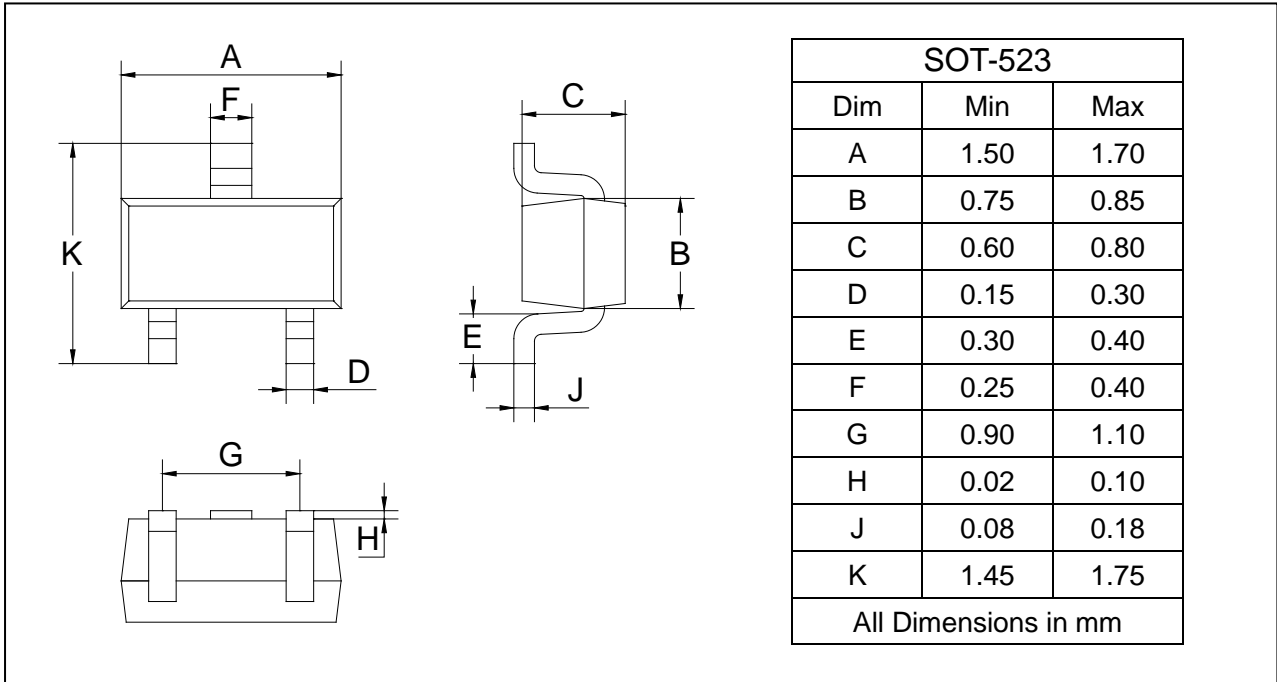
Fig. 3 Typical Collector Saturation Region

**PNP SMALL SIGNAL SURFACE MOUNT TRANSISTOR MMBT2907AT**

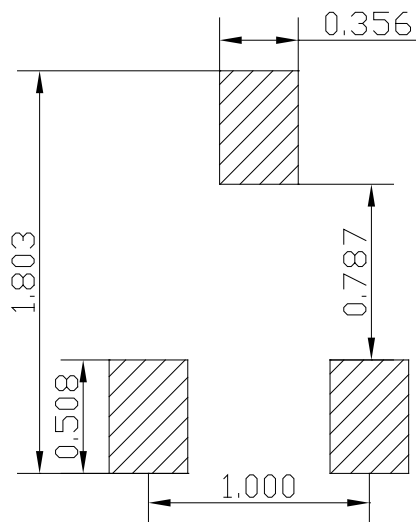
**PACKAGE OUTLINE**

Plastic surface mounted package

SOT-523



**SOLDERING FOOTPRINT**



Unit : mm

**PACKAGE INFORMATION**

Device	Package	Shipping
MMBT2907AT	SOT-523	3000/Tape&Reel