



**THE DATASHEET OF  
MMBT2907A-TP**





Micro Commercial Components



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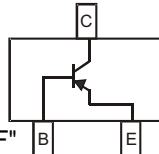
# MMBT2907A

## PNP General Purpose Amplifier

### Features

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Capable of 350mWatts of Pd, 600mA continuous collector current.
- Operating and Storage Junction Temperatures: -55°C to 150°C
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking : 2F
- Thermal Resistance, Junction to Ambient: 500°C/W
- Halogen free available upon request by adding suffix "-HF"

Pin Configuration  
Top View



### Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
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#### OFF CHARACTERISTICS

$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage* ( $I_C=-10\text{mA}$ , $I_B=0$ )	-60		Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ( $I_C=-10\mu\text{A}$ , $I_E=0$ )	-60		Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ( $I_E=-10\mu\text{A}$ , $I_C=0$ )	-5.0		Vdc
$I_{BL}$	Base Cutoff Current ( $V_{CE}=-30\text{Vdc}$ , $V_{BE}=-0.5\text{Vdc}$ )		-50	nAdc
$I_{CEX}$	Collector Cutoff Current ( $V_{CE}=-30\text{Vdc}$ , $V_{BE}=-0.5\text{Vdc}$ )		-50	nAdc
$I_{CBO}$	Collector Cutoff Current ( $V_{CB}=-50\text{Vdc}$ , $I_E=0$ ) ( $V_{CB}=-50\text{Vdc}$ , $I_E=0$ , $T_A=150^\circ\text{C}$ )		-0.1 -10.0	$\mu\text{Adc}$

#### ON CHARACTERISTICS

$h_{FE}$	DC Current Gain* ( $I_C=-0.1\text{mA}$ , $V_{CE}=-10\text{Vdc}$ ) ( $I_C=-1.0\text{mA}$ , $V_{CE}=-10\text{Vdc}$ ) ( $I_C=-10\text{mA}$ , $V_{CE}=-10\text{Vdc}$ ) ( $I_C=-150\text{mA}$ , $V_{CE}=-10\text{Vdc}$ ) ( $I_C=-500\text{mA}$ , $V_{CE}=-10\text{Vdc}$ )	75 100 100 100 50	300	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ( $I_C=-150\text{mA}$ , $I_B=-15\text{mA}$ ) ( $I_C=-500\text{mA}$ , $I_B=-50\text{mA}$ )		-0.4 -1.6	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage ( $I_C=-150\text{mA}$ , $I_B=-15\text{mA}$ ) ( $I_C=-500\text{mA}$ , $I_B=-50\text{mA}$ )		-1.3 -2.6	Vdc

#### SMALL-SIGNAL CHARACTERISTICS

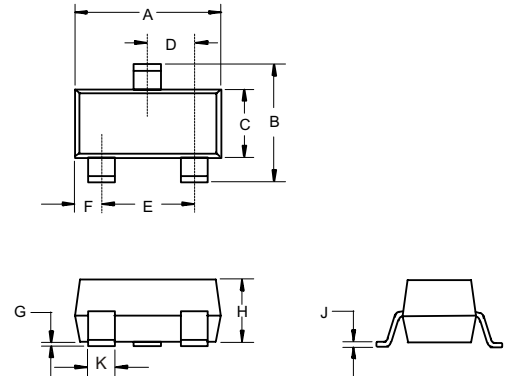
$f_T$	Current Gain-Bandwidth Product ( $I_C=-50\text{mA}$ , $V_{CE}=-20\text{Vdc}$ , $f=100\text{MHz}$ )	200		MHz
$C_{cbo}$	Output Capacitance ( $V_{CB}=-10\text{Vdc}$ , $I_E=0$ , $f=1.0\text{MHz}$ )		8.0	pF
$C_{ibo}$	Input Capacitance ( $V_{EB}=-2.0\text{Vdc}$ , $I_C=0$ , $f=1.0\text{MHz}$ )		30.0	pF

#### SWITCHING CHARACTERISTICS

$t_d$	Delay Time	( $V_{CC}=-3.0\text{Vdc}$ , $I_C=-150\text{mA}$ )	10	ns
$t_r$	Rise Time	( $I_{B1}=-15\text{mA}$ )	40	ns
$t_s$	Storage Time	( $V_{CC}=-3.0\text{Vdc}$ , $I_C=-150\text{mA}$ )	80	ns
$t_f$	Fall Time	( $I_{B1}=I_{B2}=-15\text{mA}$ )	30	ns

\*Pulse Width  $\leq 300\mu\text{s}$ , Duty Cycle  $\leq 2.0\%$

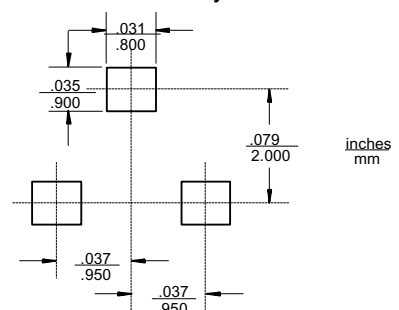
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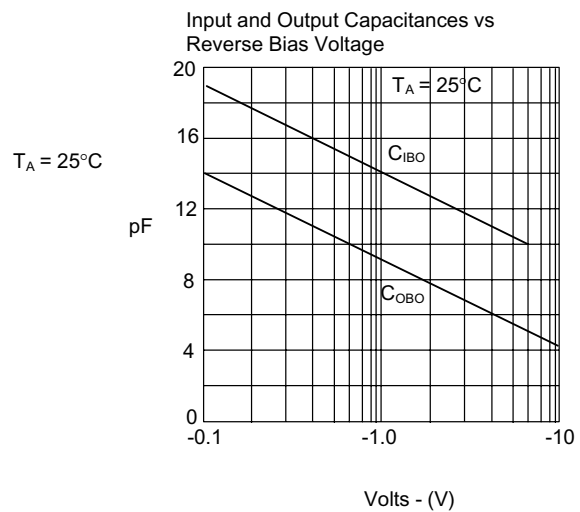
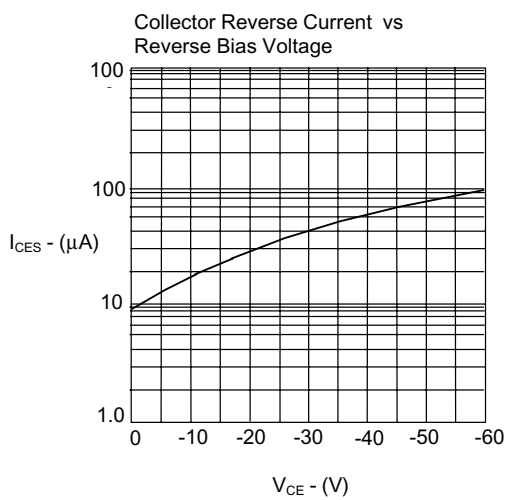
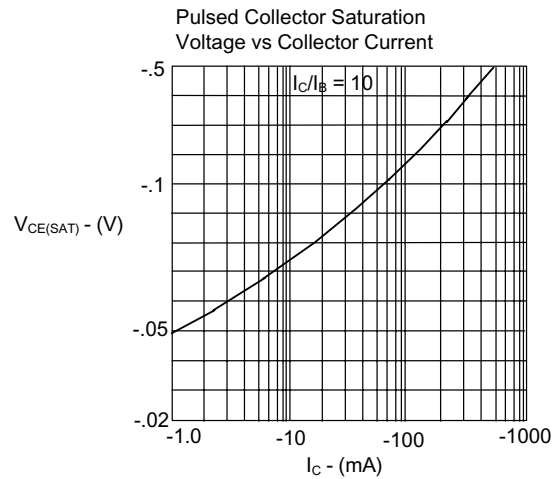
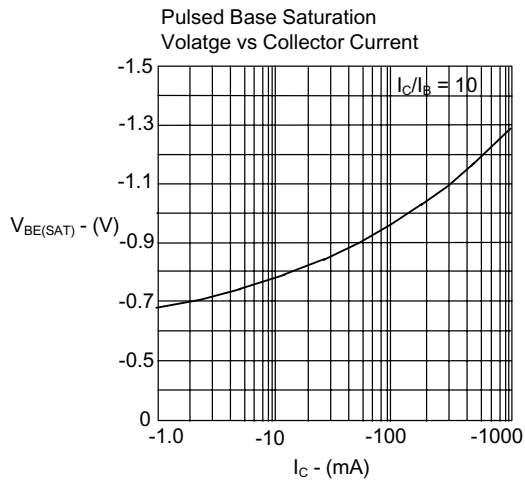
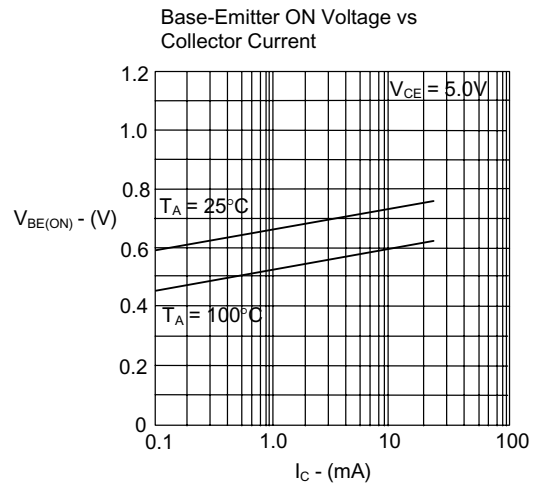
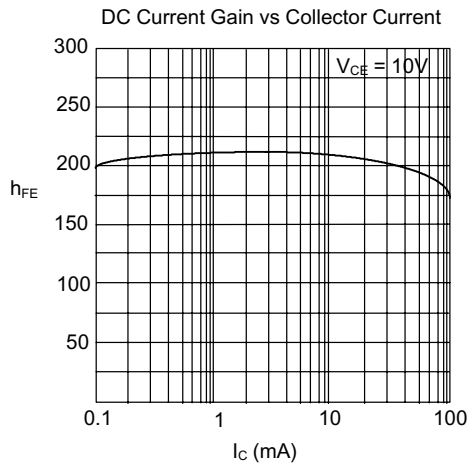
DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.104	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

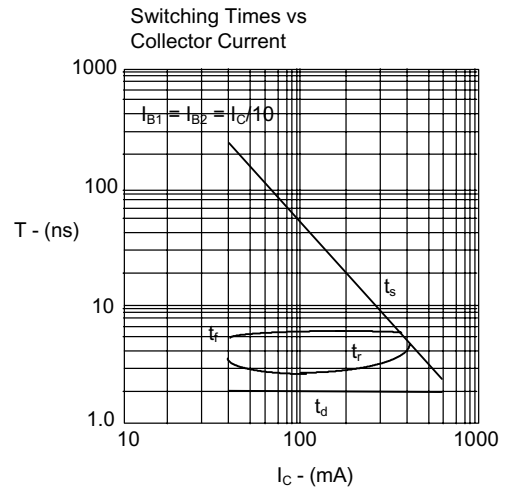
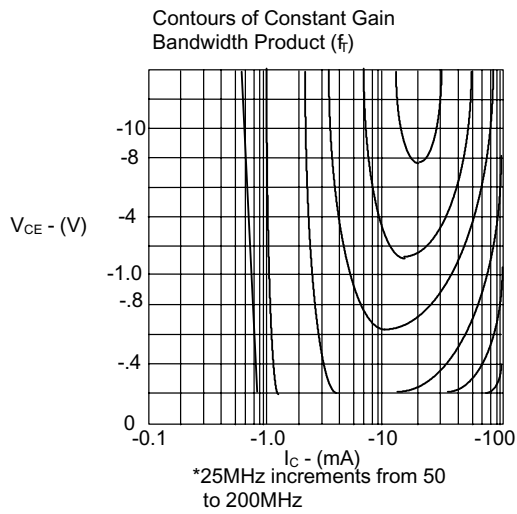
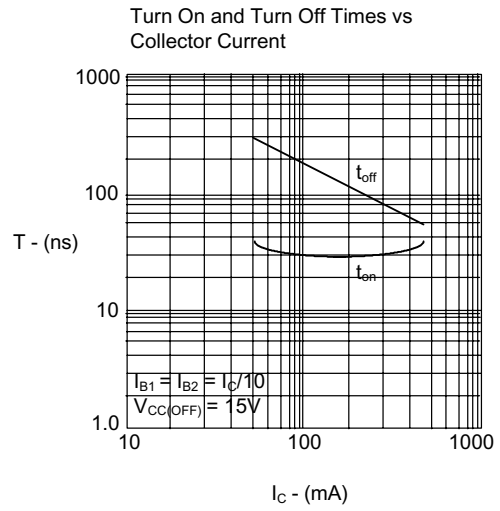
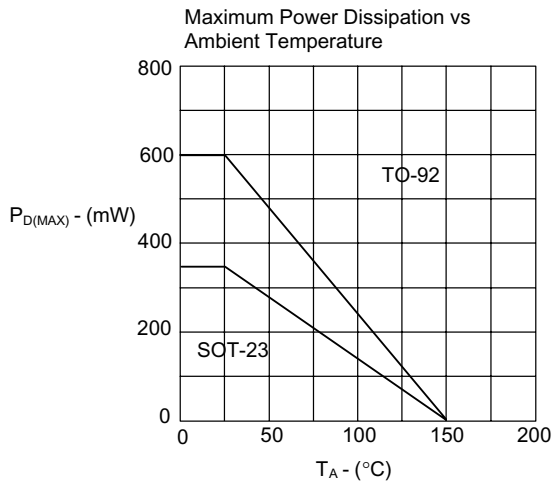
#### Suggested Solder Pad Layout



# MMBT2907A



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**Ordering Information :**

Device	Packing
Part Number-TP	Tape&Reel; 3Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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