



Micro Commercial Components

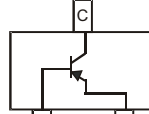
Micro Commercial Components  
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Fax: (818) 701-4939

# MMBT2907A

## Features

- Surface Mount SOT-23 Package
- Capable of 350mWatts of Pd, 600mA continuous collector current.
- Operating and Storage Junction Temperatures: -55°C to 150°C
- Case Material: Molded Plastic. UL Flammability Classification Rating 94-0 and MSL Rating 1
- Marking : 2F

Pin Configuration  
Top View



## PNP General Purpose Amplifier

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

Symbol	Parameter	Min	Max	Units
<b>OFF CHARACTERISTICS</b>				
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage* ( $I_C=10mA$ , $I_B=0$ )	60		Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ( $I_C=10\mu A$ , $I_E=0$ )	60		Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ( $I_E=10\mu A$ , $I_C=0$ )	5.0		Vdc
$I_{BL}$	Base Cutoff Current ( $V_{CE}=30Vdc$ , $V_{BE}=0.5Vdc$ )		50	nAdc
$I_{CEX}$	Collector Cutoff Current ( $V_{CE}=30Vdc$ , $V_{BE}=0.5Vdc$ )		50	nAdc
$I_{CBO}$	Collector Cutoff Current ( $V_{CB}=50Vdc$ , $I_E=0$ ) ( $V_{CB}=50Vdc$ , $I_E=0$ , $T_A=150^\circ C$ )		0.1 10.0	$\mu A$ dc

### ON CHARACTERISTICS

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

### SMALL-SIGNAL CHARACTERISTICS

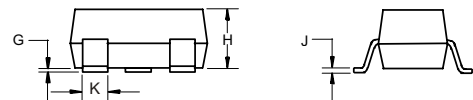
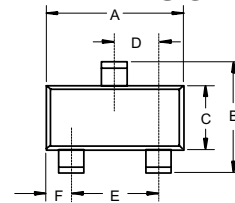
$f_T$	Current Gain-Bandwidth Product ( $I_C=50mA$ , $V_{CE}=20Vdc$ , $f=100MHz$ )	200		MHz
$C_{cbo}$	Output Capacitance ( $V_{CB}=10Vdc$ , $I_E=0$ , $f=1.0MHz$ )		8.0	pF
$C_{ibo}$	Input Capacitance ( $V_{EB}=2.0Vdc$ , $I_C=0$ , $f=1.0MHz$ )		30.0	pF

### SWITCHING CHARACTERISTICS

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

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

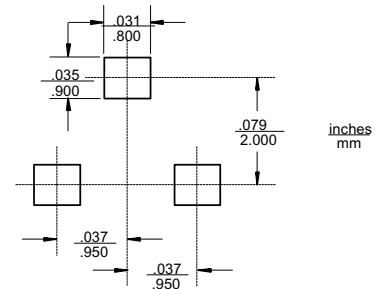
### SOT-23



#### DIMENSIONS

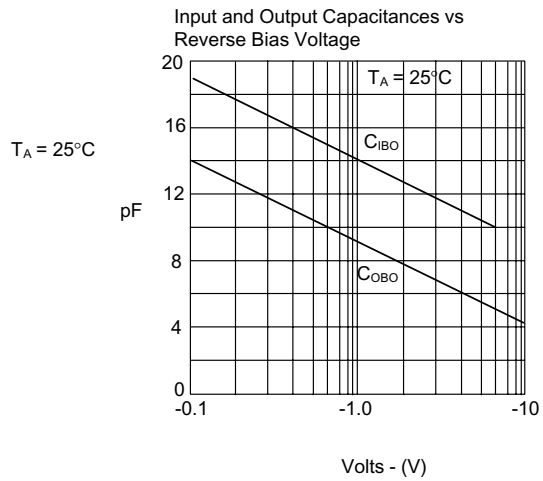
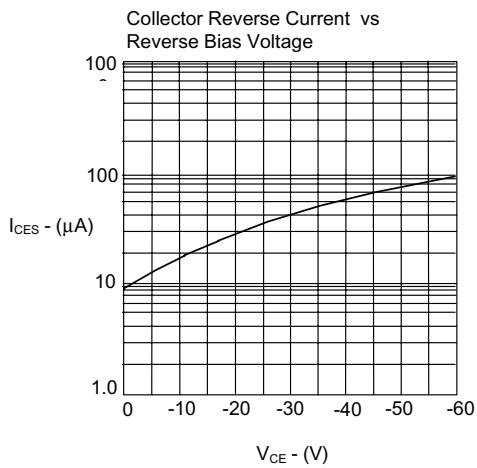
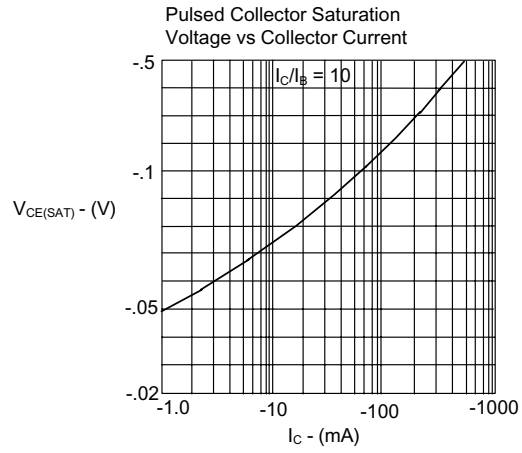
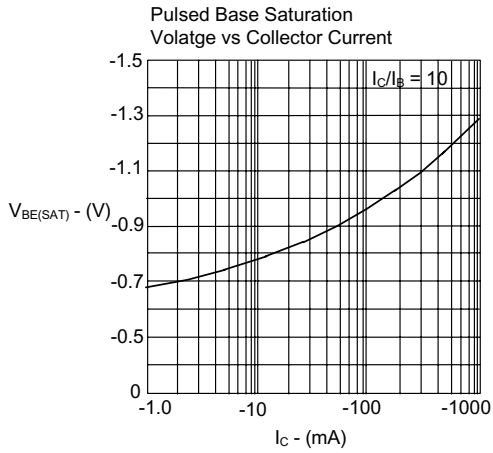
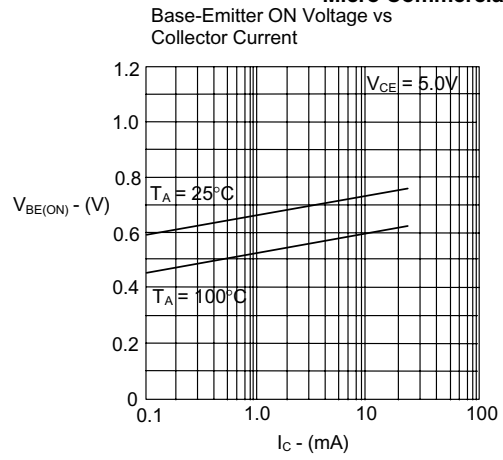
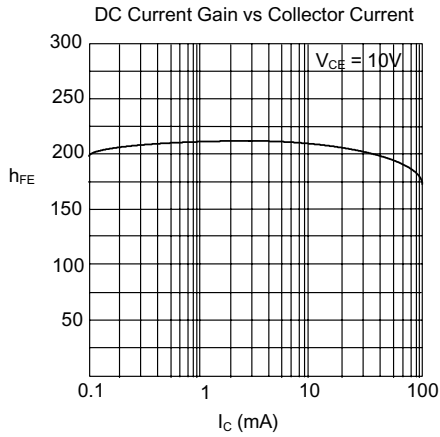
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.098	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

### Suggested Solder Pad Layout



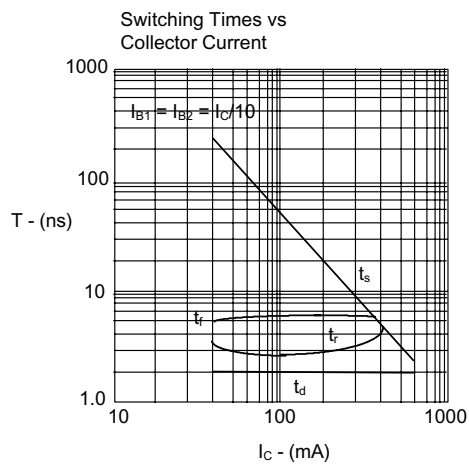
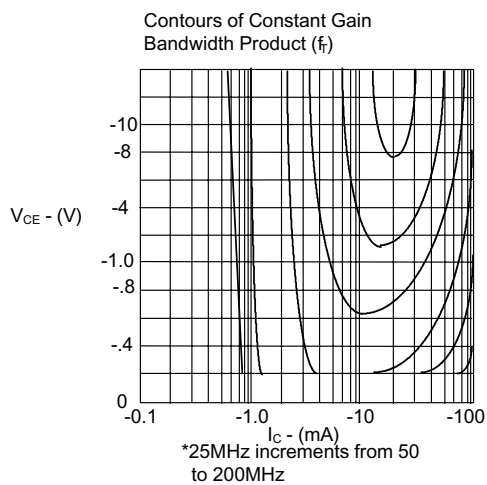
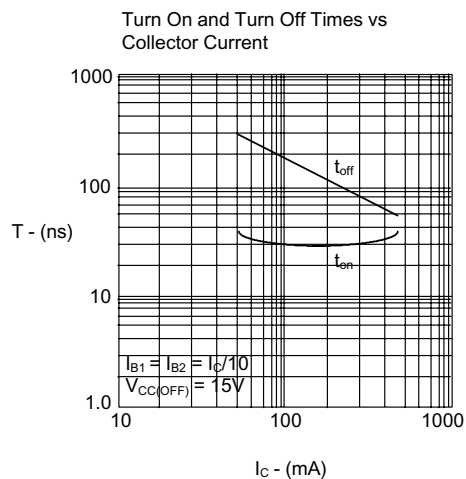
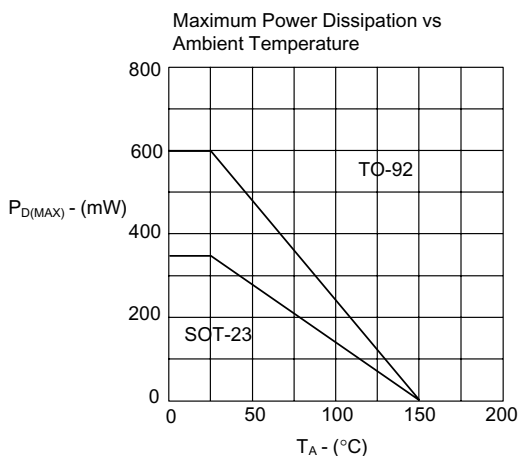
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## Ordering Information

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

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