



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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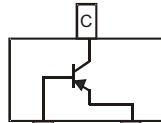
MMBT2907A

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 |
|----------------------------|--|-----|-------------|-----------------|
| 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 | μAdc |

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

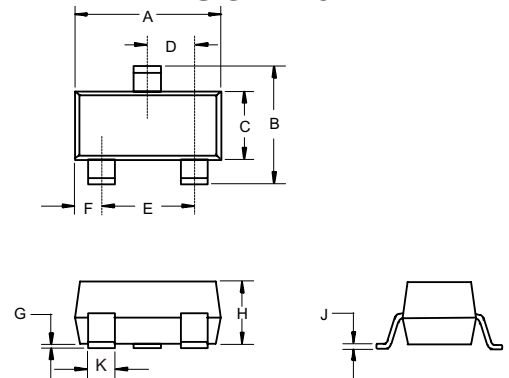
| | | | | |
|-----------|---|-----|------|-----|
| f_T | Current Gain-Bandwidth Product ($I_C=50\text{mA}$, $V_{CE}=20\text{Vdc}$, $f=100\text{MHz}$) | 200 | | MHz |
| C_{cbo} | Output Capacitance ($V_{CB}=10\text{Vdc}$, $I_E=0$, $f=1.0\text{MHz}$) | | 8.0 | pF |
| C_{ibo} | Input Capacitance ($V_{EB}=2.0\text{Vdc}$,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

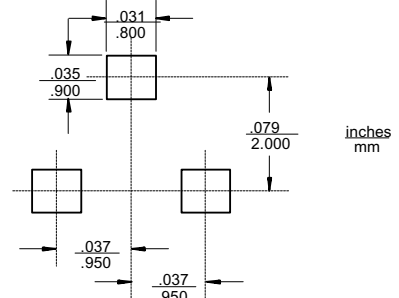
*Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2.0\%$

SOT-23



| 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 | |

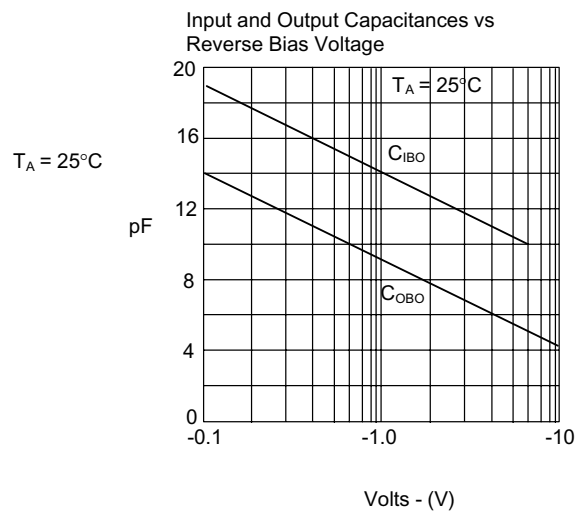
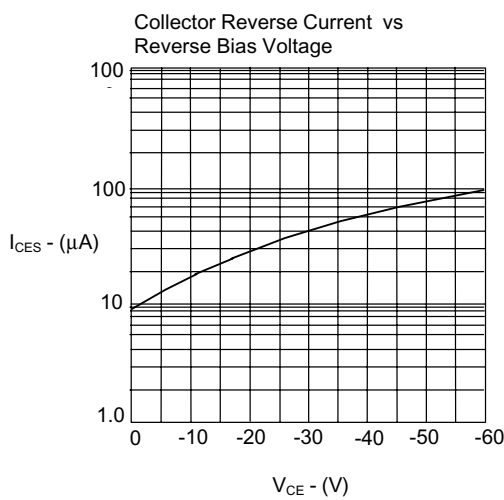
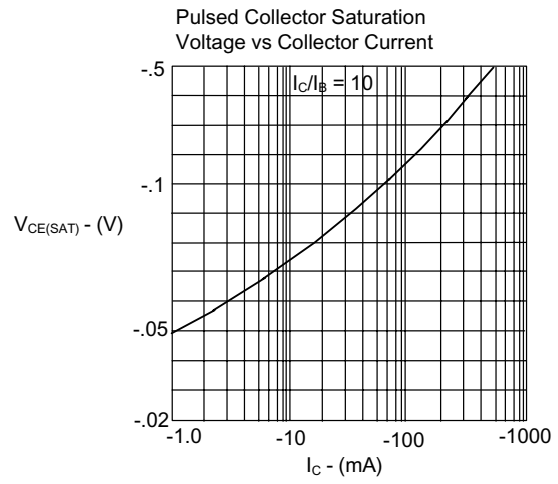
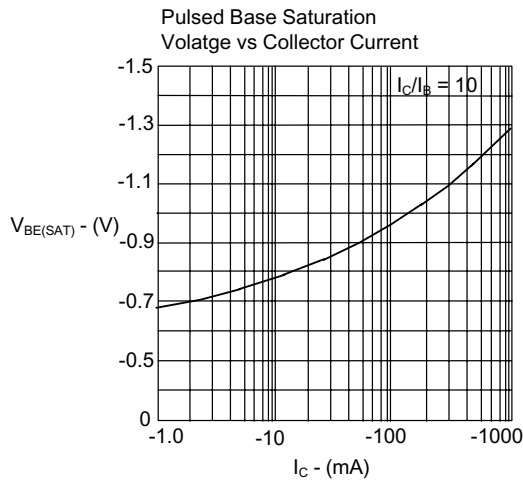
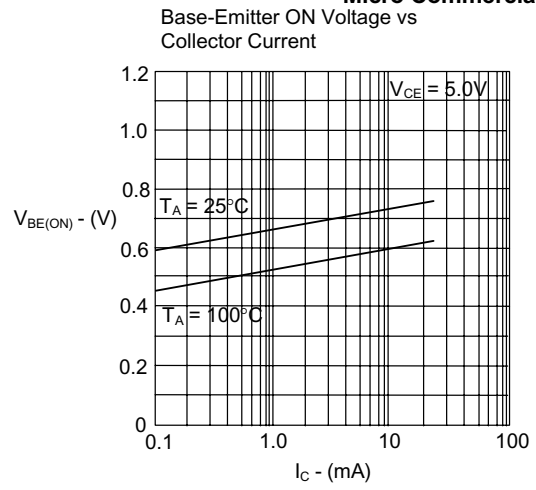
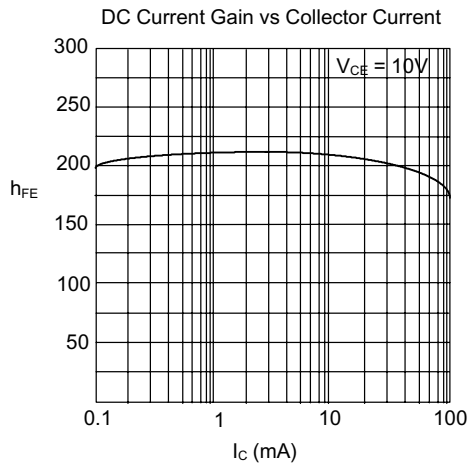
Suggested Solder Pad Layout



MMBT2907A



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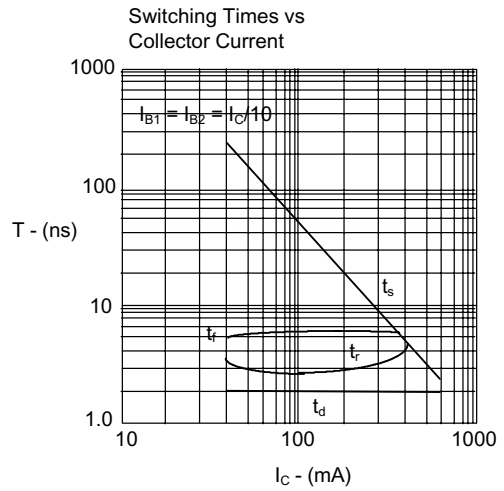
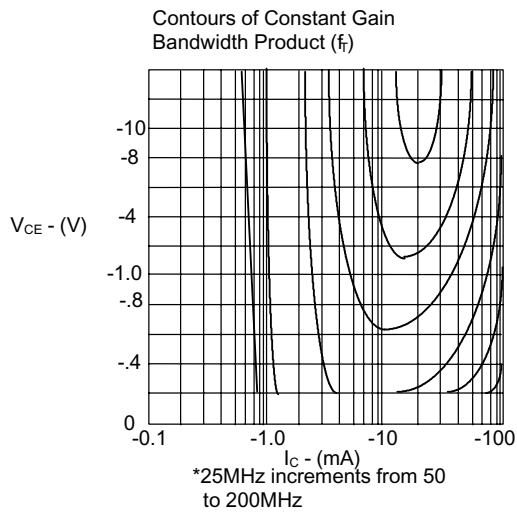
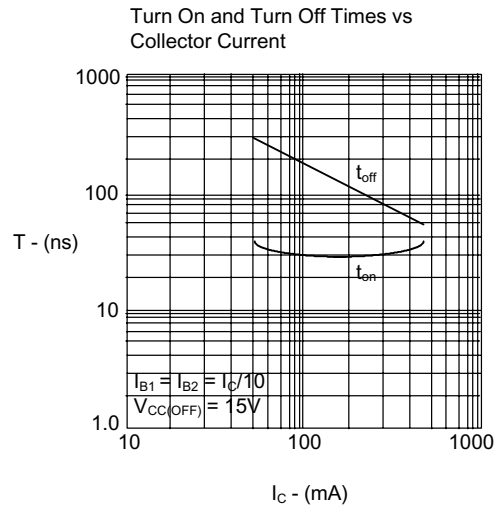
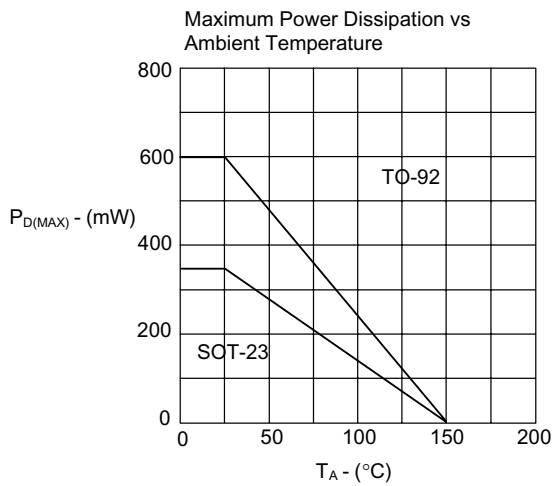


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MMBT2907A



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Ordering Information :

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

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

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