

# PN2907A

## PNP General Purpose Amplifier

### Features

- Halogen free available upon request by adding suffix "-HF"
- Through Hole Package
- Capable of 600mWatts of Power Dissipation and 600mA Ic
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Marking:MPS2907A
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

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

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

### ON CHARACTERISTICS

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

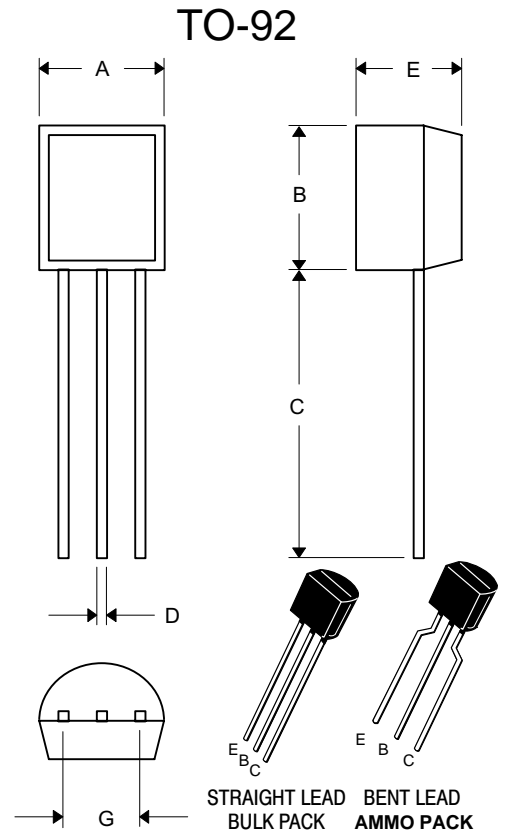
### SMALL-SIGNAL CHARACTERISTICS

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

### SWITCHING CHARACTERISTICS

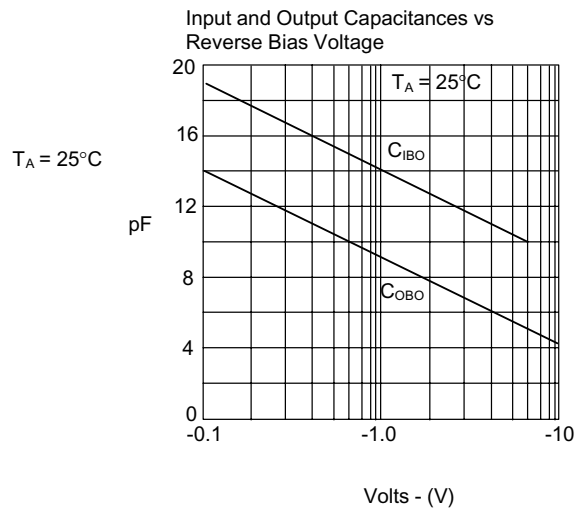
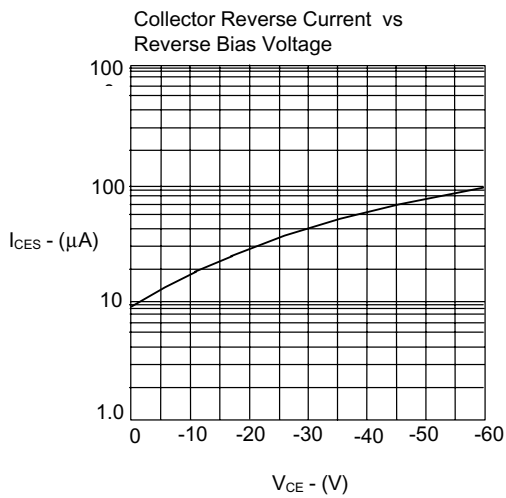
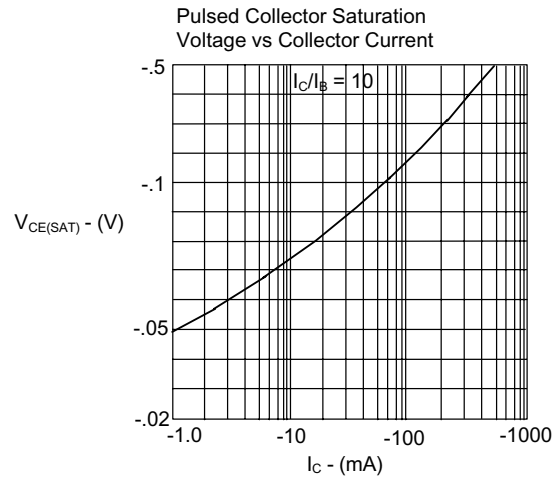
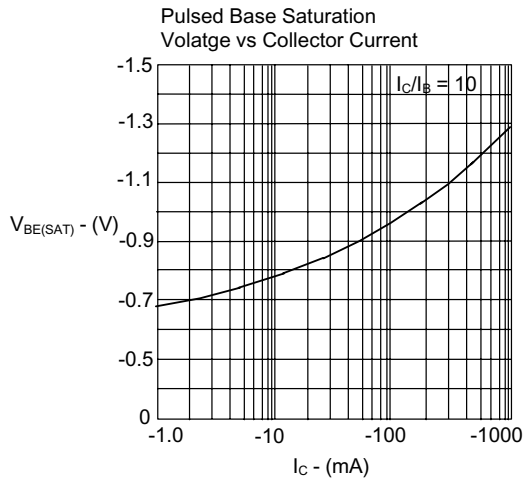
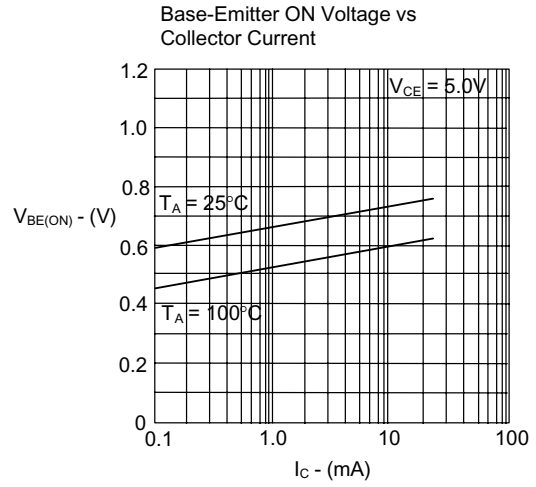
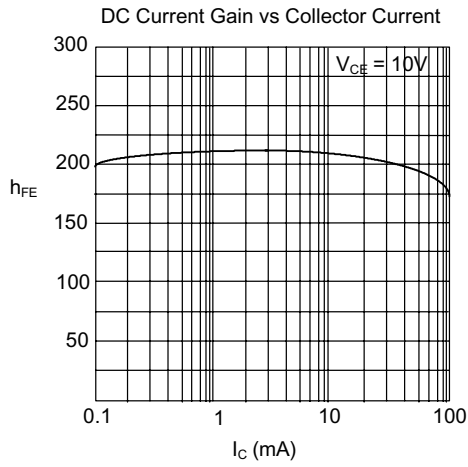
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|-------|--------------|-----------------------------------|----|----|
| $t_d$ | Delay Time   | ( $V_{CC}=3.0Vdc$ , $I_C=150mA$ ) | 10 | ns |
| $t_r$ | Rise Time    | ( $I_{B1}=15mA$ )                 | 40 | ns |
| $t_s$ | Storage Time | ( $V_{CC}=3.0Vdc$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

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



| DIM | DIMENSIONS |      |       |      | NOTE          |
|-----|------------|------|-------|------|---------------|
|     | INCHES     |      | MM    |      |               |
| A   | .175       | .185 | 4.45  | 4.70 |               |
| B   | .175       | .185 | 4.45  | 4.70 |               |
| C   | .500       | ---  | 12.70 | ---  |               |
| D   | .016       | .020 | 0.41  | 0.63 |               |
| E   | .135       | .145 | 3.43  | 3.68 |               |
| G   | .095       | .105 | 2.42  | 2.67 | Straight Lead |
|     | .173       | .220 | 4.40  | 5.60 | Bent Lead     |

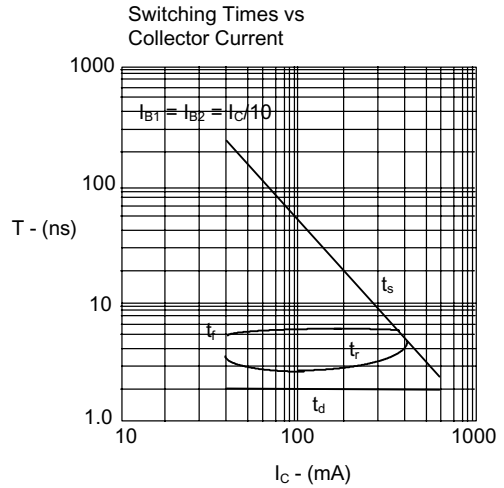
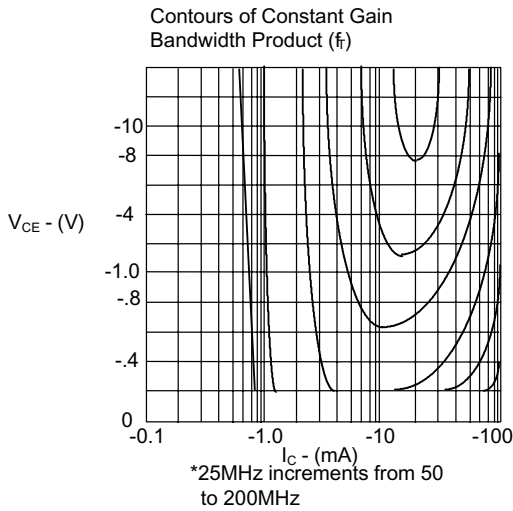
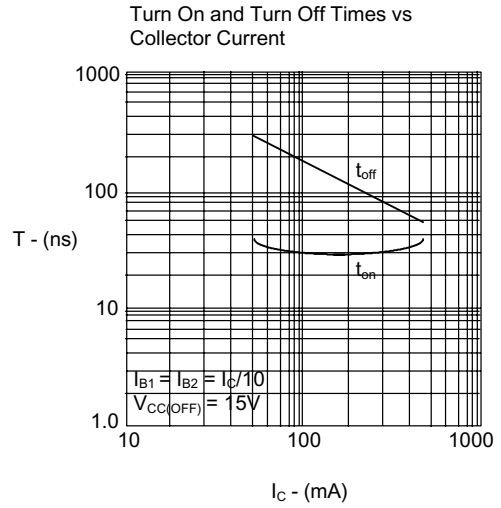
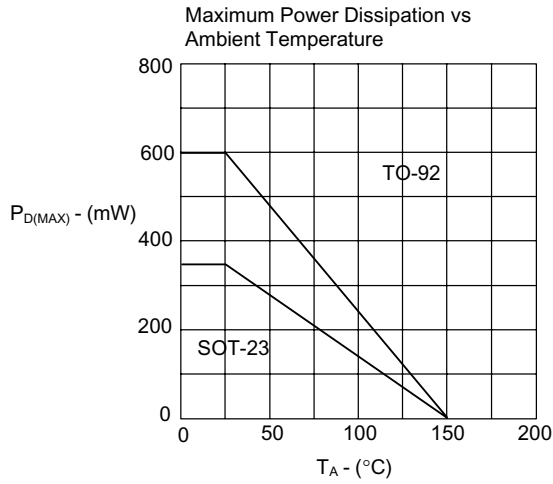
\* For ammo packing detailed specification, click here to visit our website of product packaging for details.



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### Ordering Information :

| Device         | Packing                     |
|----------------|-----------------------------|
| Part Number-AP | Ammo Packing: 20Kpcs/Carton |
| Part Number-BP | Bulk: 100Kpcs/Carton        |

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

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