



Micro Commercial Components

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PN2222A

625mW NPN General Purpose Amplifier

Features

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- ≠ Marking: Type number
- Continuous Collector Current (Ic) =600mA.
- Operating and storage temperature range(Tj&Tstg) from -55°C ~+150 °C
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

Electrical Characteristics @ 25°C Unless Otherwise Specified

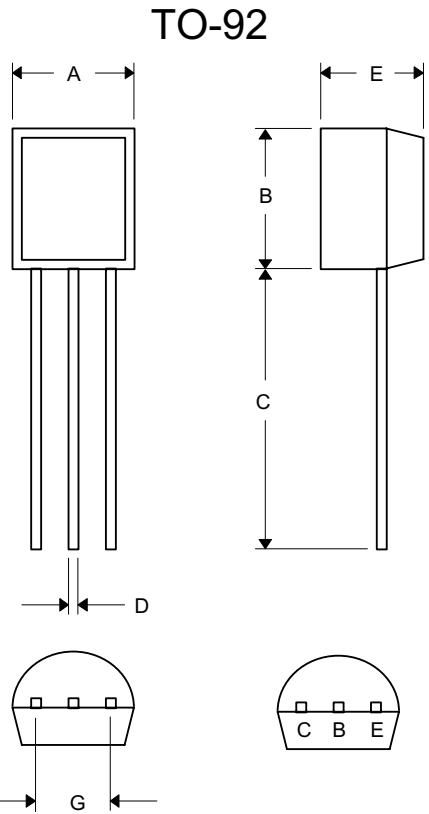
| Symbol | Parameter | Min | Max | Units |
|----------------------------|---|-----|-----|-------|
| OFF CHARACTERISTICS | | | | |
| V _{(BR)CEO} | Collector-Emitter Breakdown Voltage* (I _C =10mAdc, I _B =0) | 40 | | Vdc |
| V _{(BR)CBO} | Collector-Base Breakdown Voltage (I _C =10μAdc, I _E =0) | 75 | | Vdc |
| V _{(BR)EBO} | Emitter-Base Breakdown Voltage (I _E =10μAdc, I _C =0) | 6.0 | | Vdc |
| I _{BL} | Base Cutoff Current (V _{CE} =60Vdc, V _{BE} =3.0Vdc) | | 20 | nAdc |
| I _{CEX} | Collector Cutoff Current (V _{CE} =60Vdc, V _{BE} =3.0Vdc) | | 10 | nAdc |

| ON CHARACTERISTICS | | | | |
|---------------------------|--|-----------------------------------|------------|-----|
| h _{FE} | DC Current Gain* (I _C =0.1mAdc, V _{CE} =10Vdc) (I _C =1.0mAdc, V _{CE} =10Vdc) (I _C =10mAdc, V _{CE} =10Vdc) (I _C =150mAdc, V _{CE} =10Vdc) (I _C =150mAdc, V _{CE} =1.0Vdc) (I _C =500mAdc, V _{CE} =10Vdc) | 35 50 75 100 50 40 | 300 | |
| V _{CE(sat)} | Collector-Emitter Saturation Voltage (I _C =150mAdc, I _B =15mAdc) (I _C =500mAdc, I _B =50mAdc) | | 0.3 1.0 | Vdc |
| V _{BE(sat)} | Base-Emitter Saturation Voltage (I _C =150mAdc, I _B =15mAdc) (I _C =500mAdc, I _B =50mAdc) | 0.6 | 1.2 2.0 | Vdc |

| SMALL-SIGNAL CHARACTERISTICS | | | | |
|-------------------------------------|--|-----|-----|-----|
| f _T | Current Gain-Bandwidth Product (I _C =20mAdc, V _{CE} =20Vdc, f=100MHz) | 300 | | MHz |
| C _{obo} | Output Capacitance (V _{CB} =10Vdc, I _E =0, f=100kHz) | | 8.0 | pF |
| C _{ibo} | Input Capacitance (V _{BE} =0.5Vdc, I _C =0, f=100kHz) | | 25 | pF |
| NF | Noise Figure (I _C =100μAdc, V _{CE} =10Vdc, R _S =1.0kΩ f=1.0kHz) | | 4.0 | dB |

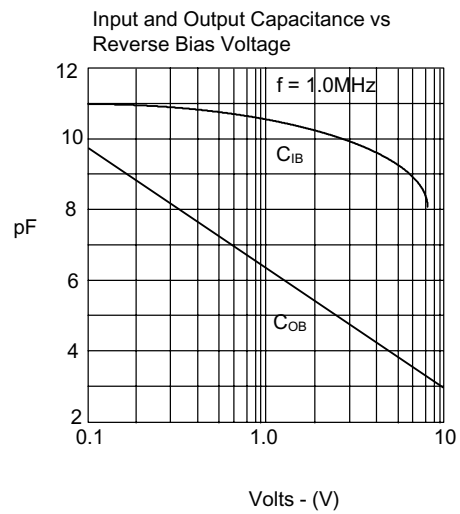
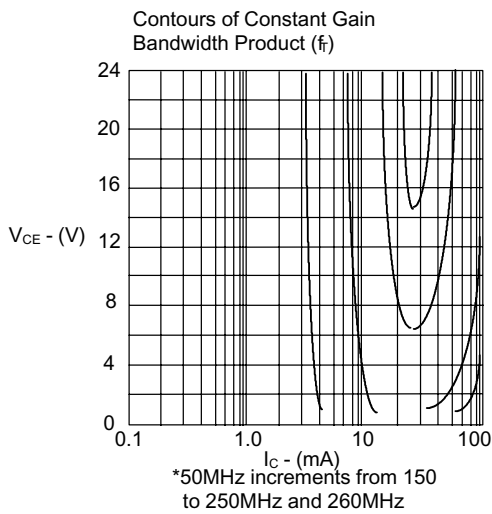
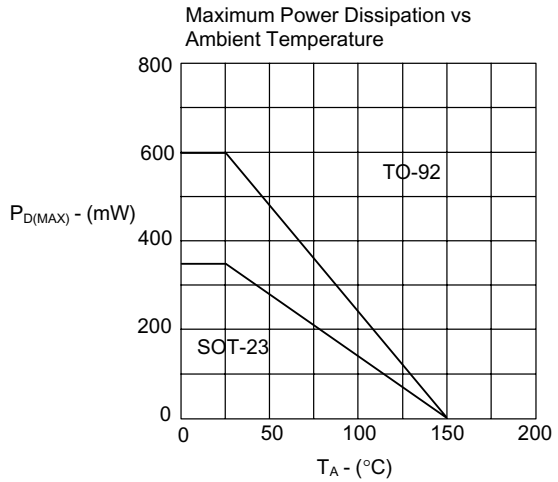
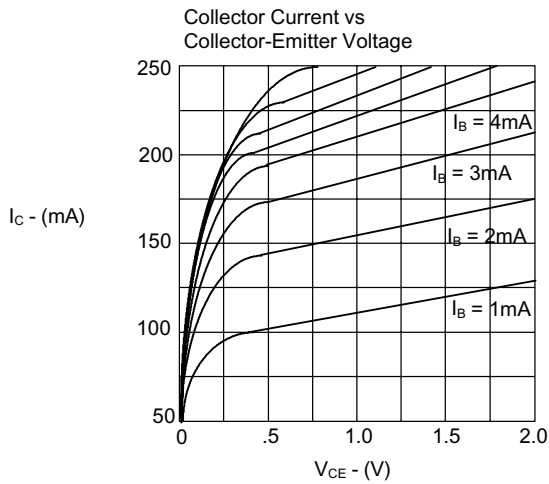
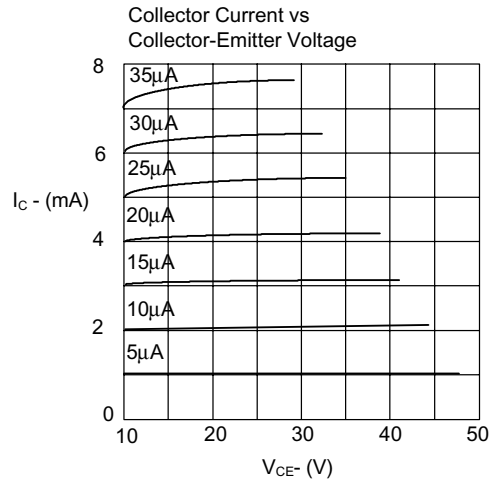
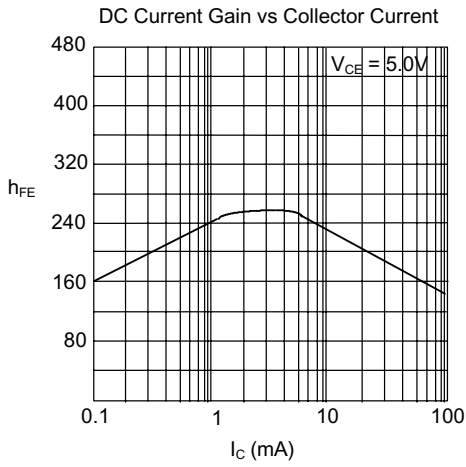
| SWITCHING CHARACTERISTICS | | | | |
|----------------------------------|--------------|---|-----|----|
| t _d | Delay Time | (V _{CC} =30Vdc, V _{BE} =0.5Vdc I _C =150mAdc, I _{B1} =15mAdc) | 10 | ns |
| t _r | Rise Time | | 25 | ns |
| t _s | Storage Time | (V _{CC} =30Vdc, I _C =150mAdc I _{B1} =I _{B2} =15mAdc) | 225 | ns |
| t _f | Fall Time | | 60 | ns |

*Pulse Width ≤ 300μs, Duty Cycle ≤ 2.0%

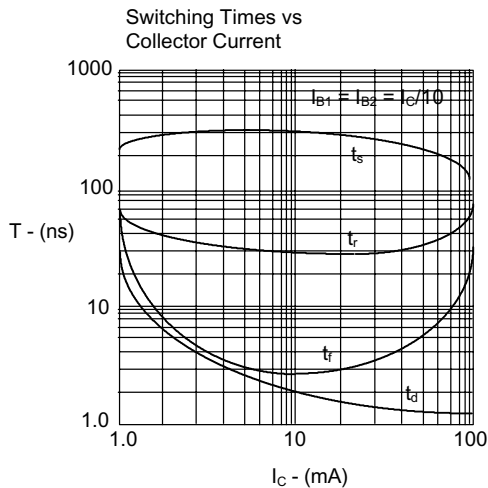
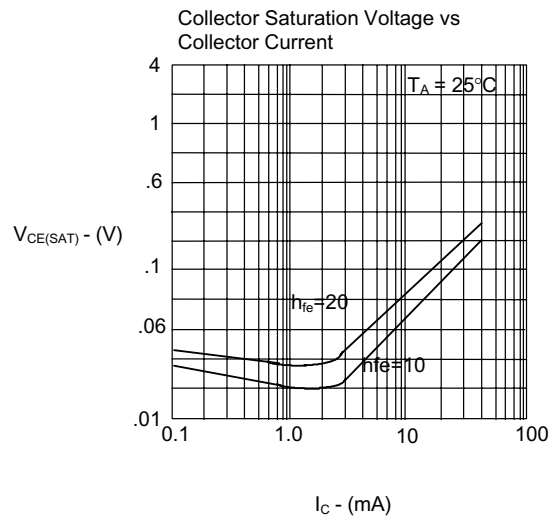
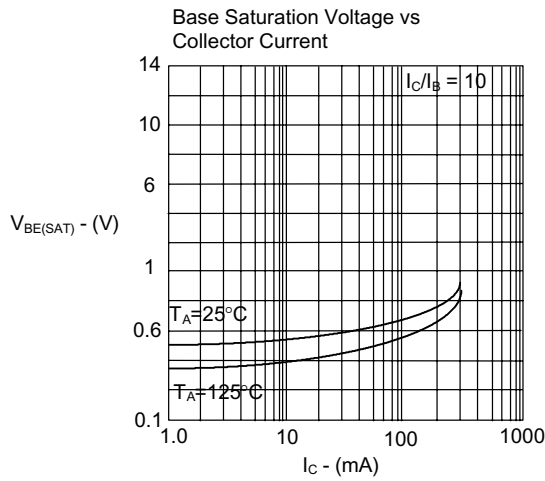
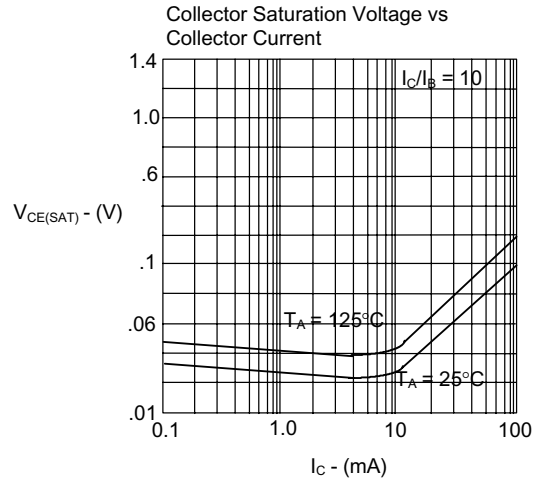
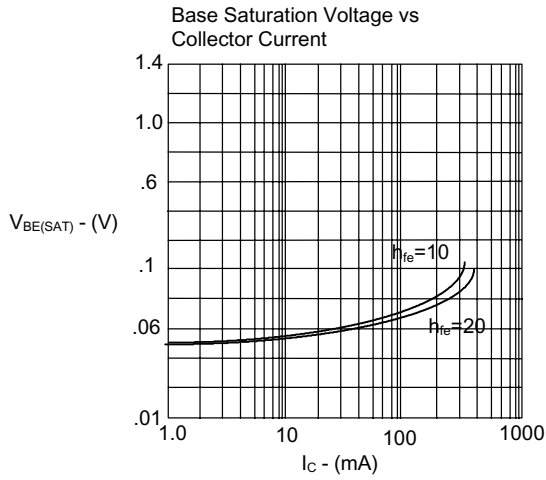


| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|-------|-------|-------|------|
| | INCHES | | MM | | |
| A | .175 | .185 | 4.45 | 4.70 | |
| B | .175 | .185 | 4.45 | 4.70 | |
| C | .500 | ----- | 12.70 | ----- | |
| D | .016 | .020 | 0.41 | 0.56 | |
| E | .135 | .145 | 3.43 | 3.68 | |
| G | .095 | .105 | 2.42 | 2.67 | |

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Ordering Information

| Device | Packing |
|------------------|---------------------|
| (Part Number)-AP | Tape&Reel;2Kpcs/Box |
| (Part Number)-BP | Bulk;100K/Ctn |

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