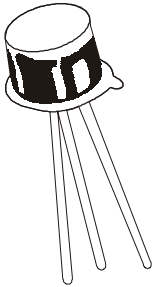


PNP SILICON PLANAR SWITCHING TRANSISTORS

2N2906A
2N2907A
TO-18



Switching And Linear Application DC to VHF Amplifier Applications

ABSOLUTE MAXIMUM RATINGS

| DESCRIPTION | SYMBOL | 2N2906A, 07A | UNIT |
|--|----------|--------------|----------|
| Collector -Emitter Voltage | VCEO | 60 | V |
| Collector -Base Voltage | VCBO | 60 | V |
| Emitter -Base Voltage | VEBO | 5.0 | V |
| Collector Current Continuous | IC | 600 | mA |
| Power Dissipation @Ta=25 degC | PD | 400 | mW |
| Derate Above 25deg C | | 2.28 | mW/deg C |
| @ Tc=25 degC | PD | 1.8 | W |
| Derate Above 25deg C | | 10.3 | mW/deg C |
| Operating And Storage Junction Temperature Range | Tj, Tstg | - 65 to +200 | deg C |

ELECTRICAL CHARACTERISTICS (Ta=25 deg C Unless Otherwise Specified)

| DESCRIPTION | SYMBOL | TEST CONDITION | VALUE | | UNIT |
|--------------------------------------|------------|--------------------|----------------|----------------|------|
| | | | MIN | MAX | |
| Collector -Emitter Voltage | VCEO* | IC=10mA, IB=0 | 60 | - | V |
| Collector -Base Voltage | VCBO | IC=10uA, IE=0 | 60 | - | V |
| Emitter-Base Voltage | VEBO | IE=10uA, IC=0 | 5.0 | - | V |
| Collector-Cut off Current | ICBO | VCB=50V, IE=0 | - | 10 | nA |
| | | Ta=150 deg C | | | |
| | | VCB=50V, IE=0 | - | 10 | uA |
| | ICEX | VCE=30V, VBE=0.5V | - | 50 | nA |
| Base Current | IB | VCE=30V, VBE=0.5V | - | 50 | nA |
| Collector Emitter Saturation Voltage | VCE(Sat)* | IC=150mA, IB=15mA | - | 0.4 | V |
| | | IC=500mA, IB=50mA | | 1.6 | V |
| Base Emitter Saturation Voltage | VBE(Sat) * | IC=150mA, IB=15mA | - | 1.3 | V |
| | | IC=500mA, IB=50mA | - | 2.6 | V |
| | | | 2N2906A | 2N2907A | |
| DC Current Gain | hFE | IC=0.1mA, VCE=10V | >40 | >75 | |
| | | IC=1mA, VCE=10V | >40 | >100 | |
| | | IC=10mA, VCE=10V | >40 | >100 | |
| | | IC=150mA, VCE=10V* | 40-120 | 100-300 | |
| | | IC=500mA, VCE=10V* | >40 | >50 | |

ELECTRICAL CHARACTERISTICS (Ta=25 deg C Unless Otherwise Specified)

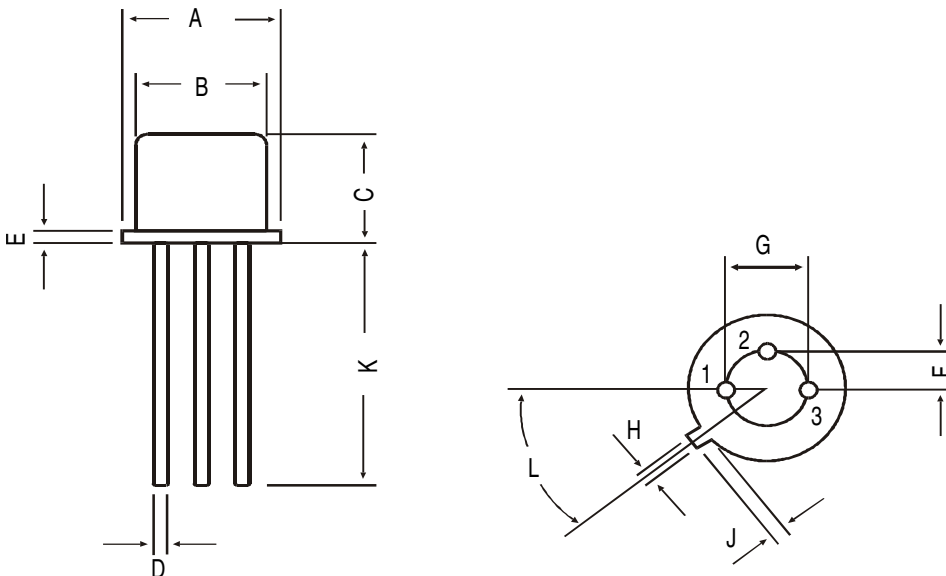
2N2906A-07A

| DESCRIPTION | SYMBOL | TEST CONDITION | MIN | MAX | UNIT |
|---------------------------------------|--------|----------------------------|-----|-----|------|
| <u>DYNAMIC CHARACTERISTICS</u> | | | | | |
| Transition Frequency | ft ** | IC=50mA, VCE=20V, f=100MHz | 200 | - | MHz |
| Out-Put Capacitance | Cob | VCB=10V, IE=0, f=100kHz | - | 8.0 | pF |
| Input Capacitance | Cib | VBE=2V, IC=0, f=100kHz | - | 30 | pF |
| <u>Switching Time</u> | | | | | |
| Delay time | td | IC=150mA, IB1=15mA | - | 10 | ns |
| Rise time | tr | VCC=30V | - | 40 | ns |
| Turn-On Time | ton | | | 45 | ns |
| Storage time | ts | IC=150mA, IB1=IB2=15mA | - | 80 | ns |
| Fall time | tf | VCC=6V | - | 30 | ns |
| Turn-Off Time | toff | | - | 100 | ns |

*Pulse Test :-Pulse Width=300us, Duty Cycle=2%

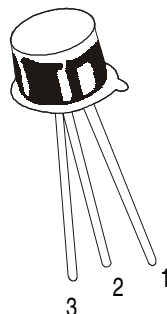
**ft is defined as the frequency at which h_{fe} extrapolates to unity

TO-18 Metal Can Package



| DIM | MIN | MAX |
|-----|--------|------|
| A | 5.24 | 5.84 |
| B | 4.52 | 4.97 |
| C | 4.31 | 5.33 |
| D | 0.40 | 0.53 |
| E | — | 0.76 |
| F | — | 1.27 |
| G | — | 2.97 |
| H | 0.91 | 1.17 |
| J | 0.71 | 1.21 |
| K | 12.70 | — |
| L | 45 DEG | |

All dimensions in mm.



PIN CONFIGURATION

1. EMITTER
2. BASE
3. COLLECTOR

Packing Detail

| PACKAGE | STANDARD PACK | | INNER CARTON BOX | | OUTER CARTON BOX | | |
|---------|---------------|----------------|------------------|------|-------------------|-------|--------|
| | Details | Net Weight/Qty | Size | Qty | Size | Qty | Gr Wt |
| TO-18 | 1K/polybag | 350 gm/1K pcs | 3" x 7.5" x 7.5" | 5.0K | 17" x 15" x 13.5" | 80.0K | 34 kgs |

Notes

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