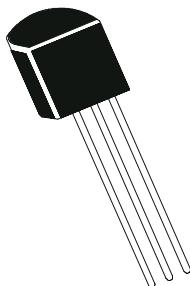


NPN SILICON PLANAR TRANSISTOR

BF370R
TO-92
BEC



Low Level Amplifier Transistor.

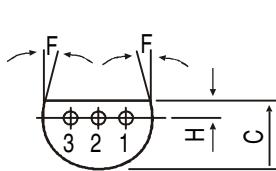
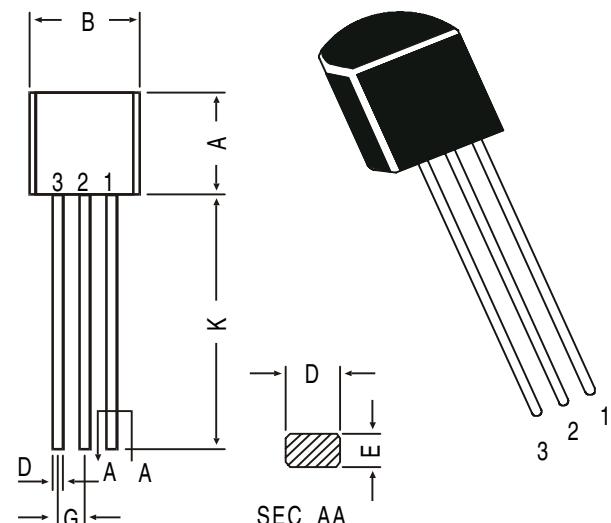
ABSOLUTE MAXIMUM RATINGS

| DESCRIPTION | VALUE | UNIT |
|--|-----------------------------------|----------|
| Collector -Base Voltage | VCBO | V |
| Collector -Emitter Voltage | VCEO | V |
| Emitter Base Voltage | VEBO | V |
| Collector Current (Continuous) | IC | mA |
| Power Dissipation @ Ta=25 deg C | PD | mW |
| Derate Above 25 deg C | 4.0 | mW/deg C |
| Operating And Storage Junction | T _j , T _{stg} | deg C |
| Temperature Range | -55 to +150 | |
| Lead Temperature for Soldering 1/16" from Body for 10 Seconds. | TL | deg C |
| Thermal Resistance | | |
| Junction to Case | R _{th} (j-c) | deg C/W |
| Junction to Ambient | R _{th} (j-a) | deg C/W |

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

| DESCRIPTION | SYMBOL | TEST CONDITION | MIN | TYP | MAX | UNIT |
|--------------------------------|-----------------|--|------------|---------|-----|------|
| Collector -Base Voltage | VCBO | IC=100uA, IE=0 | 40 | - | - | V |
| Collector -Emitter Voltage | VCEO | IC=100uA, IB=0 | 15 | - | - | V |
| Emitter Base Voltage | VEBO | IE=100uA, IC=0 | 4.5 | - | - | V |
| Collector Cut off Current | ICBO | VCB=20V, IE=0 Ta=125 deg C VCB=15V, IE=0 | - | - | 400 | nA |
| Emitter Cut off Current | IEBO | VEB=2V, IC=0 VCB=15V, IE=0 | - | - | 30 | uA |
| DC Current Gain | hFE | IC=10mA, VCE=1V | 40 | - | - | |
| DYNAMIC CHARACTERISTICS | | | | | | |
| Transistors frequency | ft | IC=10mA, VCE=10V IC=40mA, VCE=10V | 500 490 | - | - | MHz |
| Collector Capacitance | C _c | VCB=10V, IE=0, f=1MHz | | Typ 2.2 | | pF |
| Emitter Capacitance | C _e | VEB=1V, IC= I _c =0, f=1MHz | - | - | 4.5 | pF |
| Feedback Capacitance | C _{re} | IC=0, VCE=10V, f=1MHz | | Typ 1.6 | | pF |
| Interference Voltage for K=1% | G _V | V(int) RMS | | Typ 120 | | mV |

TO-92 Plastic Package

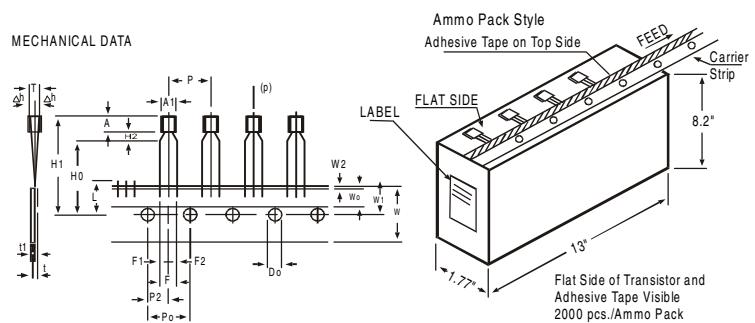


PIN CONFIGURATION
 1. BASE
 2. Emitter
 3. Collector

All dimensions in mm.

| DIM | MIN. | MAX. |
|-----|-------|------|
| A | 4.32 | 5.33 |
| B | 4.45 | 5.20 |
| C | 3.18 | 4.19 |
| D | 0.41 | 0.55 |
| E | 0.35 | 0.50 |
| F | 5 DEG | |
| G | 1.14 | 1.40 |
| H | 1.14 | 1.53 |
| K | 12.70 | — |

TO-92 Transistors on Tape and Ammo Pack



All dimensions in mm unless specified otherwise

| ITEM | SYMBOL | SPECIFICATION | | | | REMARKS |
|-------------------------------|------------|---------------|-------|------|-----------|---------|
| | | MIN. | NOM. | MAX. | TOL. | |
| BODY WIDTH | A1 | 4.0 | | 4.8 | | |
| BODY HEIGHT | A | 4.8 | | 5.2 | | |
| BODY THICKNESS | T | 3.9 | | 4.2 | | |
| PITCH OF COMPONENT | P | | | | | |
| FEED HOLE PITCH | Po | | 12.7 | 12.7 | ± 0.3 | |
| FEED HOLE CENTRE TO | | | | | ± 0.4 | |
| COMPONENT CENTRE | P2 | | 6.35 | | | |
| DISTANCE BETWEEN OUTER | | | | | ± 0.6 | |
| LEADS | F | | 5.08 | | -0.2 | |
| COMPONENT ALIGNMENT | Δh | 0 | | 1 | | |
| TAPE WIDTH | W | 18 | | | ± 0.5 | |
| HOLD-DOWN TAPE WIDTH | Wo | 6 | | | ± 0.2 | |
| HOLE POSITION | W1 | 9 | | | ± 0.7 | |
| HOLD-DOWN TAPE POSITION | W2 | 0.5 | | | ± 0.2 | |
| LEAD WIRE CLINCH HEIGHT | Ho | 16 | | | ± 0.5 | |
| COMPONENT HEIGHT | H1 | | 23.25 | | | |
| LENGTH OF SNIPPED LEADS | L | | 11.0 | | | |
| FEED HOLE DIAMETER | Do | 4 | | 1.2 | ± 0.2 | |
| TOTAL TAPE THICKNESS | t | | | | ± 0.4 | |
| LEAD - TO - LEAD DISTANCE F1, | F2 | 2.54 | | | -0.1 | |
| CLINCH HEIGHT | H2 | | 3 | | | |
| PULL - OUT FORCE | (P) | 6N | | | | |

NOTES

1. MAXIMUM ALIGNMENT DEVIATION BETWEEN LEADS NOT TO BE GREATER THAN 0.2 mm.
2. MAXIMUM NON-CUMULATIVE VARIATION BETWEEN TAPE FEED HOLES SHALL NOT EXCEED 1 mm IN 20 PITCHES.
3. HOLDDOWN TAPE NOT TO EXCEED BEYOND THE EDGE(S) OF CARRIER TAPE AND THERE SHALL BE NO EXPOSURE OF ADHESIVE.
4. NO MORE THAN 3 CONSECUTIVE MISSING COMPONENTS ARE PERMITTED.
5. A TAPE TRAILER, HAVING AT LEAST THREE FEED HOLES ARE REQUIRED AFTER THE LAST COMPONENT.
6. SPLICES SHALL NOT INTERFERE WITH THE SPROCKET FEED HOLES.

Packing Detail

| PACKAGE | STANDARD PACK | | INNER CARTON BOX | | OUTER CARTON BOX | | |
|------------|---------------|----------------|-------------------|------|-------------------|-------|----------|
| | Details | Net Weight/Qty | Size | Qty | Size | Qty | Gr Wt |
| TO-92 Bulk | 1K/polybag | 200 gm/1K pcs | 3" x 7.5" x 7.5" | 5.0K | 17" x 15" x 13.5" | 80.0K | 23 kgs |
| TO-92 T&A | 2K/ammo box | 645 gm/2K pcs | 12.5" x 8" x 1.8" | 2.0K | 17" x 15" x 13.5" | 32.0K | 12.5 kgs |

Notes

Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Discrete Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished on the CDIL Web Site/CD is believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Discrete Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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