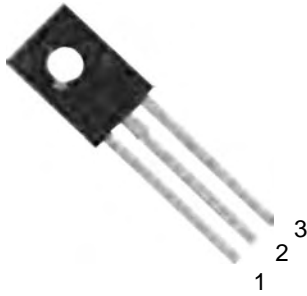


BD438/440/442(PNP)

TO-126 Transistor

TO-126



1. EMITTER
2. COLLECTOR
3. BASE

Features

✧ Amplifier and switching applications

MAXIMUM RATINGS ($T_A=25^\circ\text{C}$ unless otherwise noted)

| Symbol | Parameter | Value | Units |
|-----------|-------------------------------|---------|------------------|
| V_{CBO} | Collector-Base Voltage | BD438 | -45 |
| | | BD440 | -60 |
| | | BD442 | -80 |
| V_{CEO} | Collector-Emitter Voltage | BD438 | -45 |
| | | BD440 | -60 |
| | | BD442 | -80 |
| V_{EBO} | Emitter-Base Voltage | -5 | V |
| I_C | Collector Current –Continuous | -4 | A |
| P_C | Collector Power Dissipation | 1.25 | W |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature | -55-150 | $^\circ\text{C}$ |

Dimensions in inches and (millimeters)

ELECTRICAL CHARACTERISTICS ($T_{amb}=25^\circ\text{C}$ unless otherwise specified)

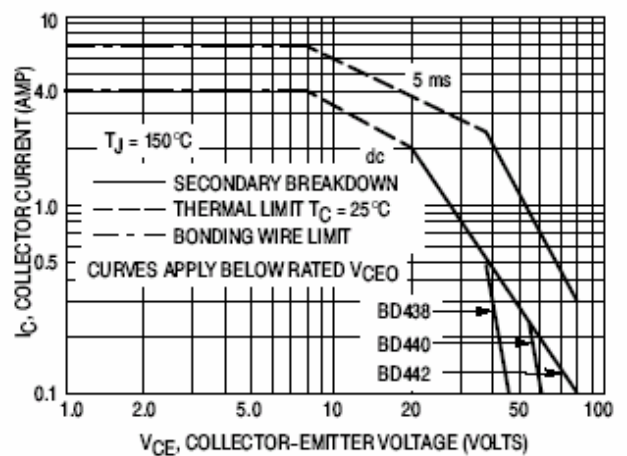
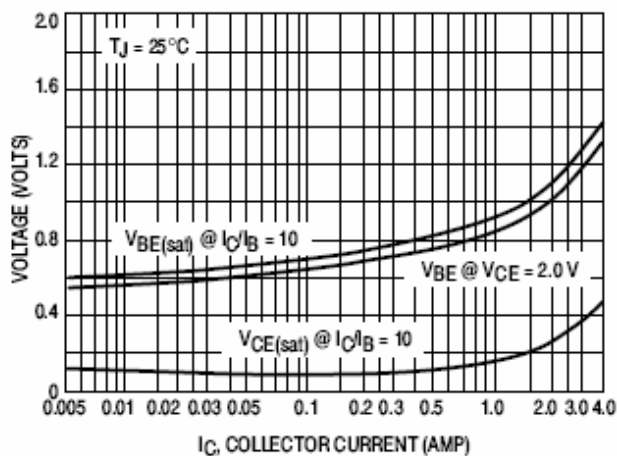
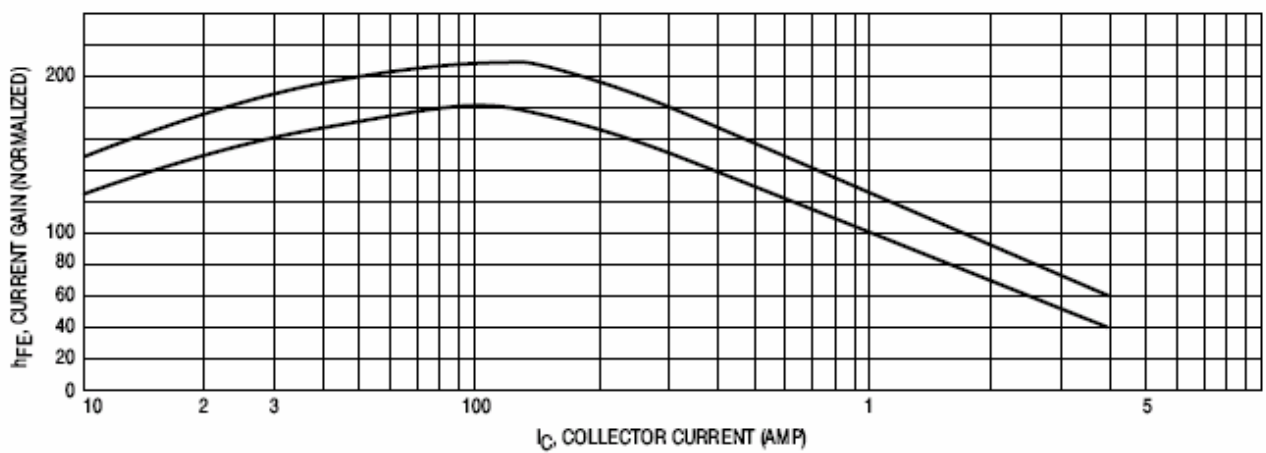
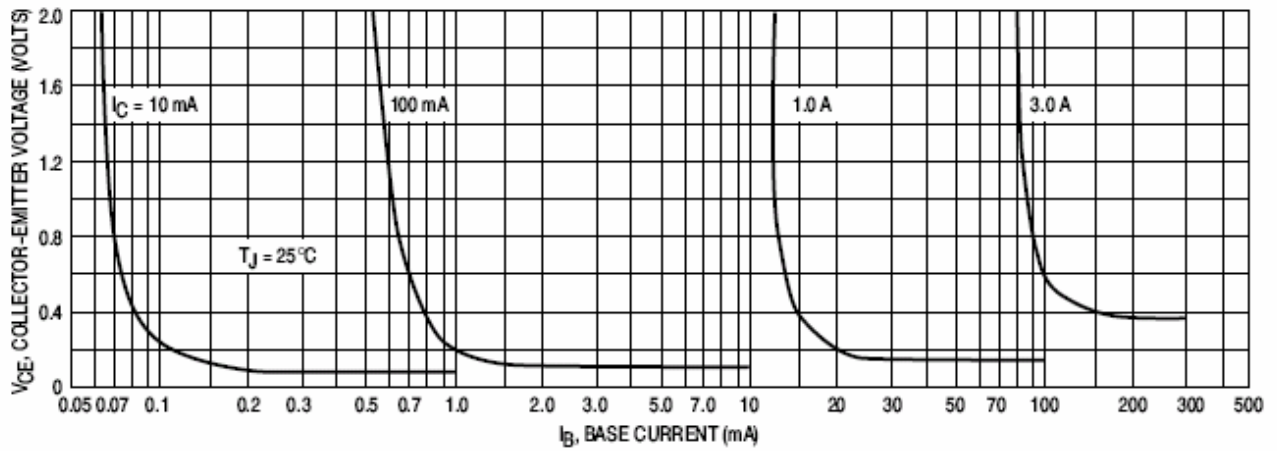
| Parameter | Symbol | Test conditions | MIN | TYP | MAX | UNIT |
|--------------------------------------|----------------------|---|-----|-----|------|---------------|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C=-100\mu\text{A}, I_E=0$ BD438 | -45 | | | V |
| | | BD440 | -60 | | | |
| | | BD442 | -80 | | | |
| Collector-emitter breakdown voltage | $V_{CEO(SUS)}^{(1)}$ | $I_C=-100\text{mA}, I_B=0$ BD438 | -45 | | | V |
| | | BD440 | -60 | | | |
| | | BD442 | -80 | | | |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E=-100\mu\text{A}, I_C=0$ | -5 | | | V |
| Collector cut-off current | I_{CBO} | $V_{CB}=-45\text{V}, I_E=0$ BD438 | | | -0.1 | μA |
| | | $V_{CB}=-60\text{V}, I_E=0$ BD440 | | | | |
| | | $V_{CB}=-80\text{V}, I_E=0$ BD442 | | | | |
| Emitter cut-off current | I_{EBO} | $V_{EB}=-5\text{V}, I_C=0$ | | | -1 | μA |
| DC current gain | $h_{FE(1)}^{(1)}$ | $V_{CE}=-5\text{V}, I_C=-10\text{mA}$ BD438 | 30 | | | |
| | | BD440 | 20 | | | |
| | | BD442 | 15 | | | |
| | $h_{FE(2)}^{(1)}$ | $V_{CE}=-1\text{V}, I_C=-500\text{mA}$ BD438 | 85 | | 375 | |
| | | BD440/BD442 | 40 | | 475 | |
| | $h_{FE(3)}^{(1)}$ | $V_{CE}=-1\text{V}, I_C=-2\text{A}$ BD438 | 40 | | | |
| | | BD440 | 25 | | | |
| | | BD442 | 15 | | | |
| Collector-emitter saturation voltage | $V_{CE(sat)}^{(1)}$ | $I_C=-3\text{A}, I_B=-300\text{mA}$ BD438 | | | -0.7 | V |
| | | BD440/BD442 | | | -0.8 | |
| Base-emitter voltage | $V_{BE}^{(1)}$ | $V_{CE}=-1\text{V}, I_C=-2\text{A}$ BD438 | | | -1.1 | V |
| | | BD440/BD442 | | | -1.5 | |
| Transition frequency | f_T | $V_{CE}=-1\text{V}, I_C=-250\text{mA}, f=1\text{MHz}$ | 3 | | | MHz |

⁽¹⁾Pulse test.

BD438/440/442(PNP)

TO-126 Transistor

Typical Characteristics



X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Bipolar Transistors - BJT category](#):

Click to view products by [Luguang manufacturer](#):

Other Similar products are found below :

[BC559C](#) [MCH4017-TL-H](#) [MMBT-2369-TR](#) [BC546/116](#) [NJVMJD148T4G](#) [NTE16](#) [NTE195A](#) [IMX9T110](#) [2N4401-A](#) [2N6728](#) [2SA1419T-TD-H](#) [2SB1204S-TL-E](#) [2SC5488A-TL-H](#) [FMC5AT148](#) [2N2369ADCSM](#) [2N2907A](#) [2N3904-NS](#) [2N5769](#) [2SC4618TLN](#) [CPH6501-TL-E](#) [BC856BW-13-F](#) [US6T6TR](#) [BAX18/A52R](#) [BC556/112](#) [IMZ2AT108](#) [MMST8098T146](#) [MCH6102-TL-E](#) [BC846B-13-F](#) [2N3879](#) [30A02MH-TL-E](#) [NTE13](#) [NTE282](#) [NTE323](#) [NTE350](#) [NTE81](#) [JANTX2N2920L](#) [JANSR2N2907AUB](#) [CMLT3946EG TR](#) [SNSS40600CF8T1G](#) [CMLT3906EG TR](#) [GRP-DATA-JANS2N2907AUB](#) [GRP-DATA-JANS2N2222AUA](#) [MMDT3946FL3-7](#) [2N4240](#) [JANS2N3019](#) [MSB30KH-13](#) [2N2221AUB](#) [2SD1815T-TL-E](#) [2N6678](#) [2N2907Ae4](#)