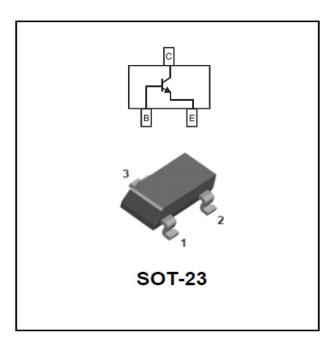




NPN Transistor



Features

- Epoxy meets UL-94 V-0 flammability rating
- Halogen free available upon request by adding suffix "HF"
- Moisture Sensitivity Level 1
- Marking:

| BC846A | 1A |
|--------|----|
| BC846B | 1B |
| BC847A | 1E |
| BC847B | 1F |
| BC847C | 1G |
| BC848A | 1J |
| BC848B | 1K |
| BC848C | 1L |

■ Maximum Ratings (Ta=25°C unless otherwise noted)

| | 18-20 C utilicos otifici wioc floted) | | | |
|--------|--|------------------|------------|--|
| Symbol | Parameter | Value | Unit | |
| Vсво | Collector-Base Voltage BC846 BC847 BC848 | 80 50 30 | V | |
| VCEO | Collector-Emitter Voltage BC846 BC847 BC848 | 65 45 30 | V | |
| VEBO | Emitter-Base Voltage | 6 | V | |
| Ic | Collector Current | 0.1 | А | |
| Pc | Collector Power Dissipation | 200 | mW | |
| Roja | Thermal Resistance From Junction To Ambient | 625 | °C/W | |
| Tj | Junction Temperature | 150 | $^{\circ}$ | |
| Tstg | Storage Temperature | - 55∼+150 | °C | |



BC846/BC847/BC848



■ Electrical Characteristics (Ta=25°C unless otherwise noted)

| Parameter | Symbol | Test conditions | Min | Max | Unit |
|--|-----------------------------|--|-------------------|-------------------|------------|
| Collector-base breakdown voltage BC846 BC847 BC848 | V _{СВО} | IC= 10μA, IE=0 | 80 50 30 | | V |
| Collector-emitter breakdown voltage BC846 BC847 BC848 | Vceo | IC= 10mA, IB=0 | 65 45 30 | | V |
| Emitter-base breakdown voltage | V_{EBO} | IE= 10μA, IC=0 | 6 | | V |
| Collector-base cut-off current BC846 BC847 BC848 | І _{СВО} | VCB=70 V ,IE=0 VCB=50 V ,IE=0 VCB=30 V ,IE=0 | | 0.1 | μ А |
| Collector-emitter cut-off current BC846 BC847 BC848 | I _{CEO} | VCE=60 V ,IB=0 VCE=45 V ,IB=0 VCE=30 V ,IB=0 | | 0.1 | μА |
| Emitter-base cut-off current | I _{EBO} | VEB=5 V , IC=0 | | 0.1 | μ Α |
| DC current gain BC846A,847A,848A BC846B,847B,848B BC847C,BC848C | h _{FE} | VCE= 5V, IC= 2mA | 110 200 420 | 220 450 800 | |
| Collector-emitter saturation voltage | $V_{\text{CE}(\text{sat})}$ | IC=100mA, IB= 5mA | | 0.5 | V |
| Base-emitter saturation voltage | V _{BE(sat)} | IC=100mA, IB= 5mA | | 1.1 | V |
| Transition frequency | f⊤ | VCE= 5 V, IC= 10mA f=100MHz | 100 | | MHz |
| Collector-base output capacitance | Cob | VCB=10V,f=1MHz | | 4.5 | pF |

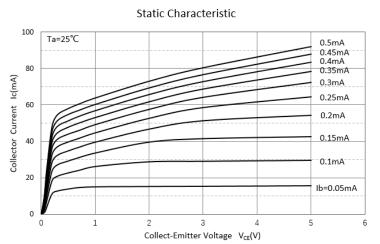
■ Ordering Information (Example)

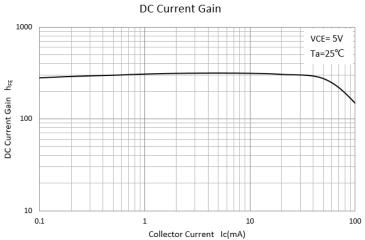
| PREFERED P/N | PACKING CODE | UNIT WEIGHT(g) | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|-------------------|-----------------|-------------------|-------------------------|-------------------------|----------------------------|---------------|
| BC846/BC847/BC848 | F2 | Approximate 0.008 | 3000 | 30000 | 120000 | 7" reel |

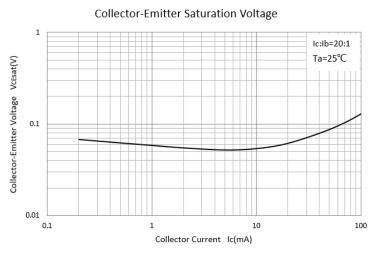
BC846/BC847/BC848

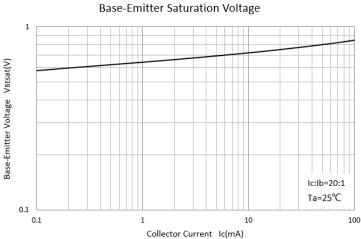


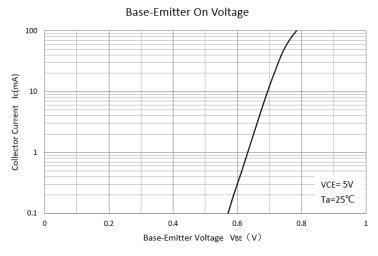
■ Characteristics(Typical)

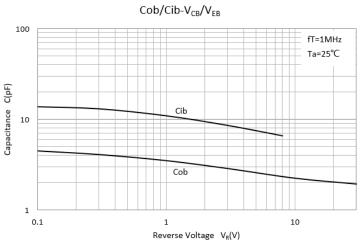








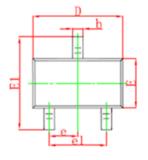


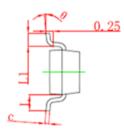


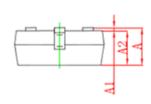




■SOT-23 Package Outline Dimensions

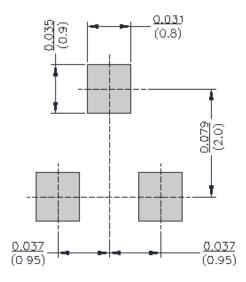






| Symbol | Dimensions In | Millimeters | Dimensions In Inches | | |
|--------|---------------|-------------|----------------------|--------|--|
| 3ym001 | Min | Max | Min | Max | |
| A | 0. 900 | 1. 150 | 0. 035 | 0.045 | |
| A1 | 0.000 | 0. 100 | 0.000 | 0.004 | |
| A2 | 0.900 | 1. 050 | 0. 035 | 0. 041 | |
| b | 0.300 | 0. 500 | 0.012 | 0.020 | |
| с | 0.100 | 0. 200 | 0.004 | 0.008 | |
| D | 2.800 | 3, 000 | 0. 110 | 0. 118 | |
| Е | 1. 200 | 1. 400 | 0.047 | 0. 055 | |
| E1 | 2. 250 | 2. 550 | 0.089 | 0.100 | |
| e | 0. 950TYP | | 0. 037TYP | | |
| el | 1. 800 | 2. 000 | 0.071 | 0.079 | |
| L | 0. 550REF | | 0. 022REF | | |
| L1 | 0.300 | 0. 500 | 0.012 | 0.020 | |
| θ | 0° | 8° | 0° | 8° | |

■SOT-23 Soldering Footprint





BC846/BC847/BC848



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2N5769 2SC2412KT146S 2SC5490A-TL-H 2SD1816S-TL-E 2SD1816T-TL-E CMXT2207 TR CPH6501-TL-E MCH4021-TL-E

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NTE26