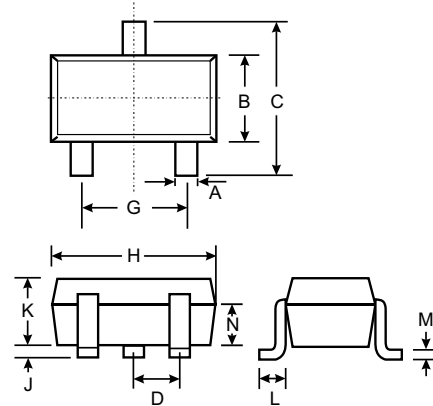


Features

- Ultra Miniature Surface Mount Package

Mechanical Data

- Case: SOT-523, Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Terminal Connections: See diagram
- Marking: 2DC4617Q: 8D
2DC4617R: 8E
2DC4617S: 8F
- Weight: 0.002 grams (approx.)



| SOT-523 | | | |
|----------------------|------|------|------|
| Dim | Min | Max | Typ |
| A | 0.15 | 0.30 | 0.22 |
| B | 0.75 | 0.85 | 0.80 |
| C | 1.45 | 1.75 | 1.60 |
| D | — | — | 0.50 |
| G | 0.90 | 1.10 | 1.00 |
| H | 1.50 | 1.70 | 1.60 |
| J | 0.00 | 0.10 | 0.05 |
| K | 0.60 | 0.80 | 0.75 |
| L | 0.10 | 0.30 | 0.22 |
| M | 0.10 | 0.20 | 0.12 |
| N | 0.45 | 0.65 | 0.50 |
| All Dimensions in mm | | | |

Maximum Ratings @ T_A = 25°C unless otherwise specified

| Characteristic | Symbol | 2DC4617Q/R/S | Unit |
|--|-----------------------------------|--------------|------|
| Collector-Base Voltage | V _{CBO} | 60 | V |
| Collector-Emitter Voltage | V _{CEO} | 50 | V |
| Emitter-Base Voltage | V _{EBO} | 7.0 | V |
| Collector Current - Continuous (Note 1) | I _C | 150 | mA |
| Power Dissipation (Note 1) | P _d | 150 | mW |
| Thermal Resistance, Junction to Ambient (Note 1) | R _{θJA} | 833 | °C/W |
| Operating and Storage and Temperature Range | T _J , T _{STG} | -55 to +150 | °C |

Electrical Characteristics @ T_A = 25°C unless otherwise specified

| Characteristic | Symbol | Min | Max | Unit | Test Condition |
|--------------------------------------|---|-------------------|-------------------|------|--|
| OFF CHARACTERISTICS (Note 2) | | | | | |
| Collector-Base Breakdown Voltage | V _{(BR)CBO} | 60 | — | V | I _C = 50μA, I _E = 0 |
| Collector-Emitter Breakdown Voltage | V _{(BR)CEO} | 50 | — | V | I _C = 1.0mA, I _B = 0 |
| Emitter-Base Breakdown Voltage | V _{(BR)EBO} | 7.0 | — | V | I _E = 50μA, I _C = 0 |
| Collector Cutoff Current | I _{CBO} | — | 100 | nA | V _{CB} = 60V |
| Emitter Cutoff Current | I _{EBO} | — | 100 | nA | V _{EB} = 7.0V |
| ON CHARACTERISTICS (Note 2) | | | | | |
| DC Current Gain | 2DC4617Q 2DC4617R 2DC4617S h _{FE} | 120 180 270 | 270 390 560 | — | V _{CE} = 6.0V, I _C = 1.0mA |
| Collector-Emitter Saturation Voltage | V _{CE(SAT)} | — | 0.4 | V | I _C = 50mA, I _B = 5.0mA |
| SMALL SIGNAL CHARACTERISTICS | | | | | |
| Output Capacitance | C _{obo} | 2.0 Typ. | 3.5 | pF | V _{CB} = 12V, f = 1.0MHz, I _E = 0 |
| Current Gain-Bandwidth Product | f _r | 180 Typ. | — | MHz | V _{CE} = 12V, I _E = -2mA, f = 1MHz |

- Notes: 1. Valid provided that terminals are kept at ambient temperature.
2. Short duration pulse test to minimize self-heating effect.