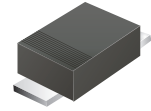


CDBMTS220-HF Thru. CDBMTS2200-HF

Reverse Voltage: 20 to 200 Volts

Forward Current: 2.0 Amp

RoHS Device
Halogen Free

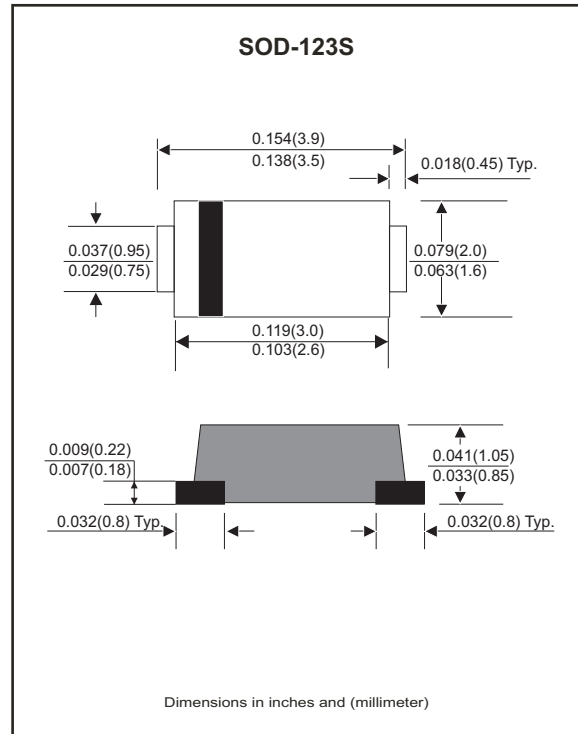


Features

- Excellent power dissipation offers better reverse leakage current and thermal resistance.
- Low profile package is 40% thinner than standards SOD-123.
- Low power loss,high efficiency.
- High current capability,low forward voltage drop.
- High surge capability.
- Guarding for overvoltage protection.
- Ultra high-speed switching.
- Silicon epitaxial planar chip,metal silicon junction.
- Lead-free part meets environmental standards of MIL-STD-19500/228

Mechanical data

- Epoxy: UL94-V0 rated flame retardant.
- Case: Molded plastic, SOD-123S/MINI SMA
- Terminals: Solderable per MIL-STD-750, Method 2026.
- Polarity: Indicated by cathode band.
- Mounting Position: any
- Weight: 0.0155 grams approx.



Electrical Characteristics (at T_A=25°C unless otherwise noted)

| Parameter | Symbol | CDBMTS 220-HF | CDBMTS 230-HF | CDBMTS 240-HF | CDBMTS 250-HF | CDBMTS 260-HF | CDBMTS 280-HF | CDBMTS 2100-HF | CDBMTS 2150-HF | CDBMTS 2200-HF | Unit | |
|---|-----------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|------|----|
| Repetitive peak reverse voltage | V _{RRM} | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 150 | 200 | V | |
| Continuous reverse voltage | V _R | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 105 | 140 | V | |
| RMS voltage | V _{RMS} | 14 | 21 | 28 | 35 | 42 | 56 | 70 | 150 | 200 | V | |
| Maximum Forward rectified current | I _O | 2.0 | | | | | | | | | A | |
| Maximum forward voltage @ I _F =2.0A | V _F | 0.50 | | | 0.70 | | 0.85 | | 0.92 | | V | |
| Maximum forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC methode) | I _{FSM} | 50 | | | | | | | | | A | |
| Maximum reverse Current (V _R =V _{RRM}) | T _J =25°C | 0.5 | | | | | | | | | mA | |
| | T _J =100°C | 20 | | | | | | | | | | |
| Typical diode Junction capacitance (F=1MHz and applied 4V DC reverse voltage) | C _J | 160 | | | | | | | | | pF | |
| Operating temperature | T _J | -55 to +125 | | | | -55 to +150 | | | | | | °C |
| Storage temperature range | T _{STG} | -65 to +175 | | | | | | | | | °C | |

Rating and Characteristic Curves (CDBMTS220-HF Thru. CDBMTS2200-HF)

Fig.1- Typical Forward Current Derating Curve

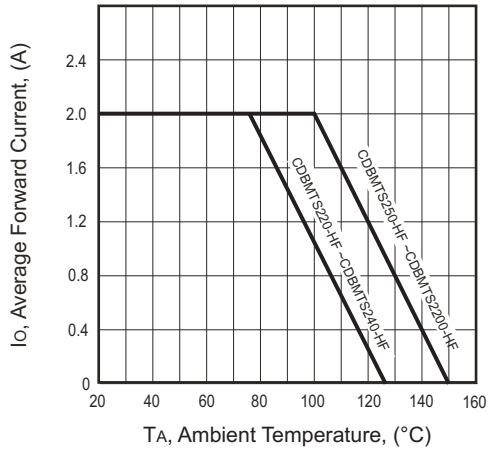


Fig.2 - Typical Forward Characteristics

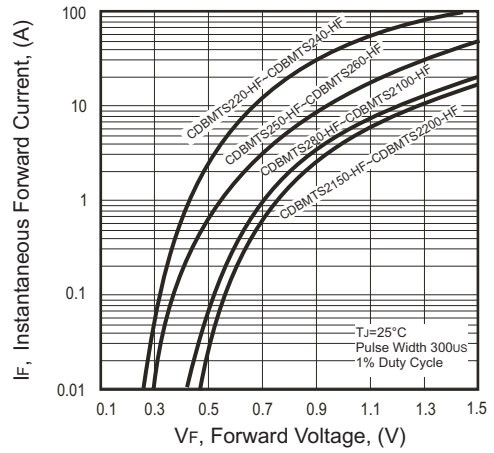


Fig.3 - Maximum Non-repetitive Forward Surge Current

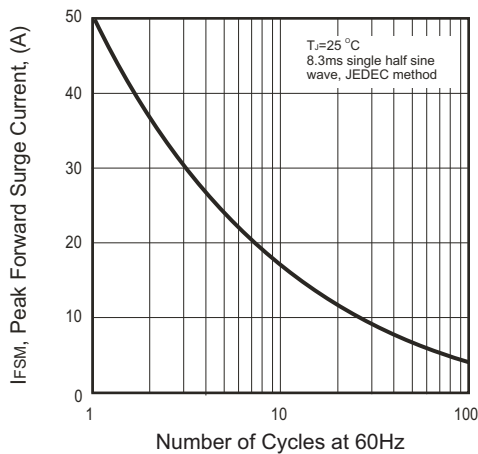


Fig.4 - Typical Junction Capacitance

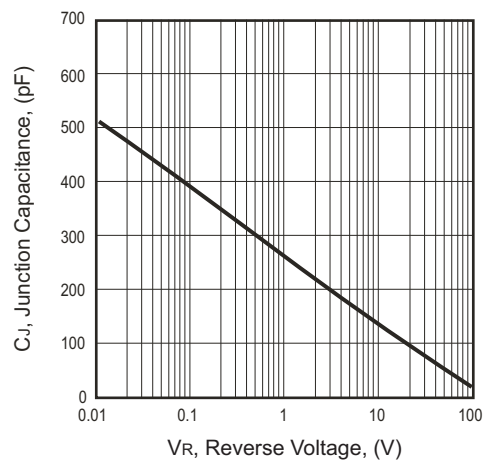
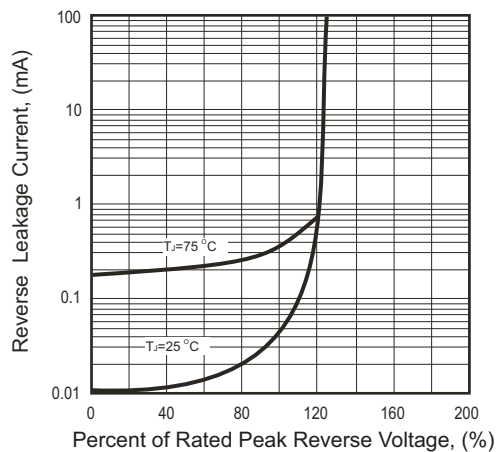
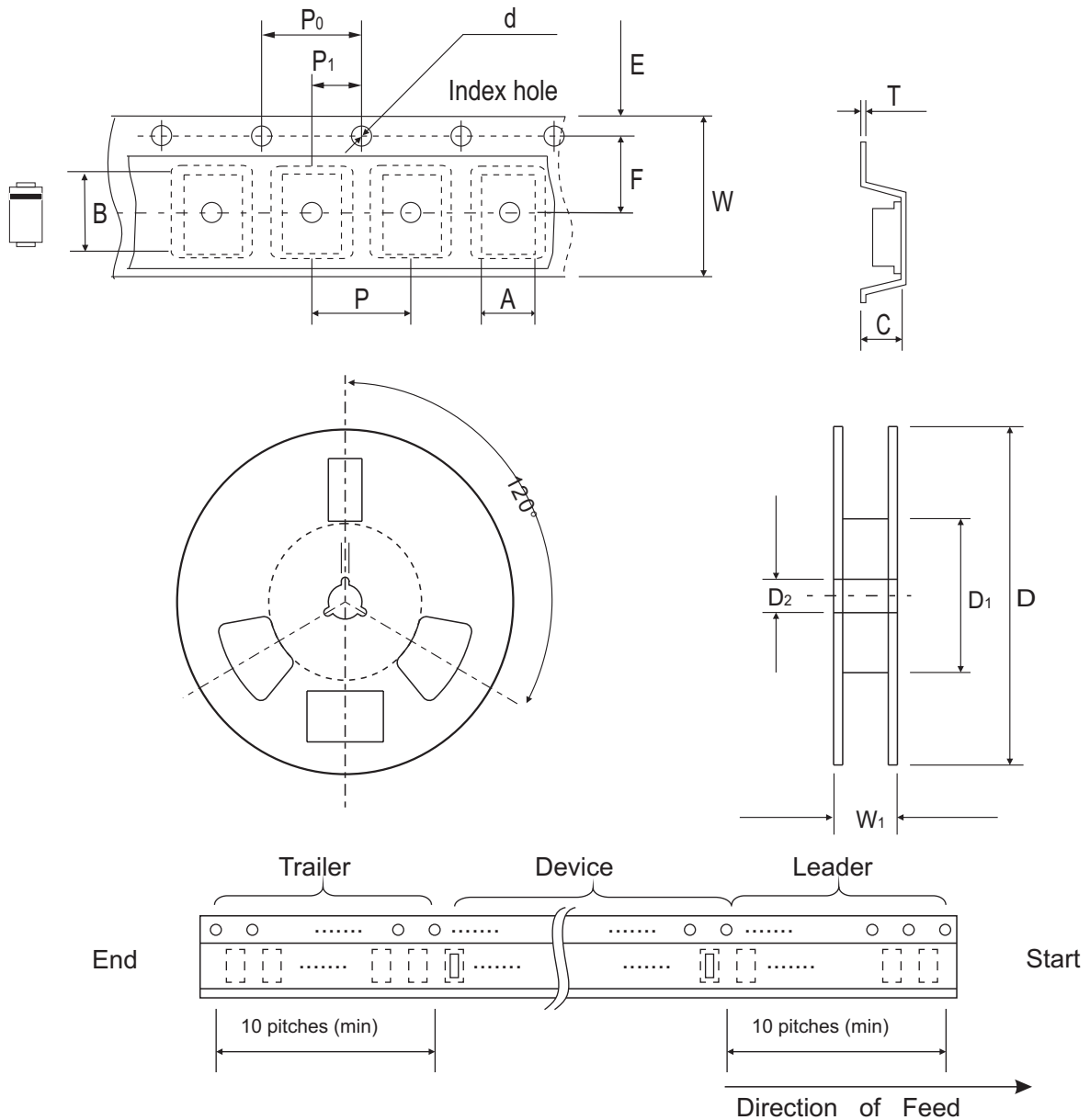


Fig.5 - Typical Reverse Characteristics





Reel Taping Specification



| SOD-123S | SYMBOL | A | B | C | d | D | D1 | D2 |
|----------|--------|-------------------|-------------------|-------------------|-------------------|------------------|------------|-------------------|
| | (mm) | 2.00 ± 0.10 | 3.85 ± 0.10 | 1.10 ± 0.10 | 1.50 ± 0.10 | 178 ± 2.00 | 62.0 MIN. | 13.0 ± 0.50 |
| | (inch) | 0.079 ± 0.004 | 0.152 ± 0.004 | 0.043 ± 0.004 | 0.059 ± 0.004 | 7.00 ± 0.079 | 2.440 MIN. | 0.512 ± 0.020 |

| SOD-123S | SYMBOL | E | F | P | P0 | P1 | T | W | W1 |
|----------|--------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| | (mm) | 1.75 ± 0.10 | 3.50 ± 0.10 | 4.00 ± 0.10 | 4.00 ± 0.10 | 2.00 ± 0.10 | 0.23 ± 0.10 | 8.00 ± 0.30 | 11.40 ± 1.0 |
| | (inch) | 0.069 ± 0.004 | 0.138 ± 0.004 | 0.157 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.004 | 0.009 ± 0.004 | 0.315 ± 0.012 | 0.449 ± 0.039 |

Pinning information

| Pin | Simplified outline | Symbol |
|------------------------------|---|--|
| PIN 1 Cathode PIN 2 Anode |  |  |

Marking Code

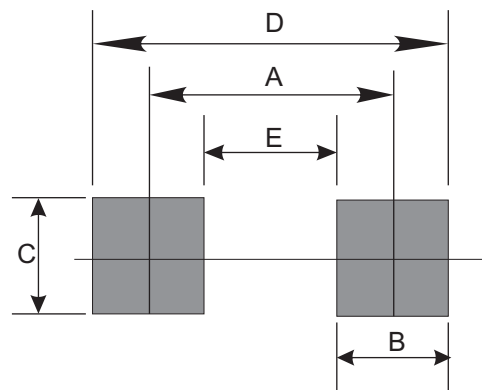
| Part Number | Marking Code |
|---------------|--------------|
| CDBMTS220-HF | 22 |
| CDBMTS230-HF | 23 |
| CDBMTS240-HF | 24 |
| CDBMTS250-HF | 25 |
| CDBMTS260-HF | 26 |
| CDBMTS280-HF | 28 |
| CDBMTS2100-HF | 20 |
| CDBMTS2150-HF | 215 |
| CDBMTS2200-HF | 220 |



xx / xxx = Product type marking code

Suggested PAD Layout

| SIZE | SOD-123S | |
|------|----------|--------|
| | (mm) | (inch) |
| A | 3.00 | 0.118 |
| B | 1.00 | 0.039 |
| C | 0.90 | 0.036 |
| D | 4.00 | 0.157 |
| E | 2.00 | 0.079 |



Standard Packaging

| Case Type | REEL PACK | |
|-----------|--------------|------------------|
| | REEL (pcs) | Reel Size (inch) |
| SOD-123S | 2,500 | 7 |