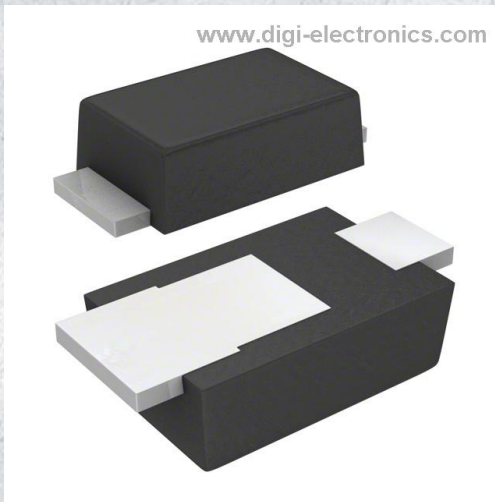


DFLS1200-7 Datasheet



<https://www.DiGi-Electronics.com>

| | |
|------------------------------|---|
| DiGi Electronics Part Number | DFLS1200-7-DG |
| Manufacturer | Diodes Incorporated |
| Manufacturer Product Number | DFLS1200-7 |
| Description | DIODE SCHOTTKY 200V 1A PWRDI123 |
| Detailed Description | Diode 200 V 1A Surface Mount PowerDI™ 123 |

This model DFLS1200-7 is available at DiGi Electronics.

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We welcome your inquiries regarding pricing, lead time, or other product-related questions.

 [Request a Quote](#)

 [Datasheet Search](#)



Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

DiGi is a global authorized distributor of electronic components.

Purchase and inquiry

Manufacturer Product Number:

DFLS1200-7

Series:

-

Technology:

Schottky

Current - Average Rectified (Io):

1A

Speed:

Fast Recovery =< 500ns, > 200mA (Io)

Capacitance @ Vr, F:

23pF @ 5V, 1MHz

Package / Case:

POWERDI*123

Operating Temperature - Junction:

-65°C ~ 175°C

Manufacturer:

Diodes Incorporated

Product Status:

Active

Voltage - DC Reverse (Vr) (Max):

200 V

Voltage - Forward (Vf) (Max) @ If:

850 mV @ 1 A

Current - Reverse Leakage @ Vr:

2 µA @ 200 V

Mounting Type:

Surface Mount

Supplier Device Package:

PowerDI™ 123

Base Product Number:

DFLS1200

Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8541.10.0080

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99



DFLS1200

1.0A HIGH VOLTAGE SCHOTTKY BARRIER RECTIFIER PowerDI123

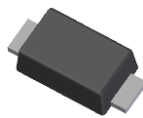
Features

- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High Efficiency
- Patented Interlocking Clip Design for High Surge Current Capacity
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**
- **An Automotive-Compliant Part is Available Under Separate Datasheet (DFLS1200Q)**

Mechanical Data

- Package: PowerDI[®]123
- Package Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminal Connections: Cathode Band
- Terminals: Finish – Matte Tin Annealed over Copper Leadframe. Solderable per MIL-STD-202, Method 208 (E3)
- Weight: 0.01 grams (Approximate)

PowerDI123



Top View

Ordering Information (Note 4)

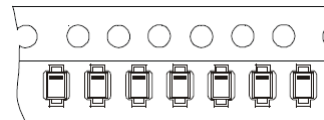
| Part Number | Package | Packing | |
|-------------|------------|---------|-------------|
| | | Qty. | Carrier |
| DFLS1200-7 | PowerDI123 | 3000 | Tape & Reel |

- Notes:
1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
 2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
 3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
 4. For packaging details, go to our website at <https://www.diodes.com/design/support/packaging/diodes-packaging/>.

Marking Information



F08 = Product Type Marking Code
 YM = Date Code Marking
 Y = Year (ex: J = 2022)
 M = Month (ex: 9 = September)



Date Code Key

| Year | 2005 | | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Code | S | | J | K | L | M | N | O | P | R | S | T |

| Month | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Code | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | O | N | D |

PowerDI is a registered trademark of Diodes Incorporated.



DFLS1200

Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

| Characteristic | Symbol | Value | Unit |
|---|--|-------|------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V _{RRM} V _{RWM} V _R | 200 | V |
| RMS Reverse Voltage | V _{R(RMS)} | 141 | V |
| Average Forward Current | I _{F(AV)} | 1.0 | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load | I _{FSM} | 40 | A |

Thermal Characteristics

| Characteristic | Symbol | Typ | Max | Unit |
|---|-----------------------------------|-------------|-----|------|
| Thermal Resistance Junction to Ambient (Note 5) | R _{θJA} | 132 | — | °C/W |
| Thermal Resistance Junction to Soldering Point (Note 6) | R _{θJS} | — | 7 | °C/W |
| Operating and Storage Temperature Range | T _J , T _{STG} | -65 to +175 | | °C |

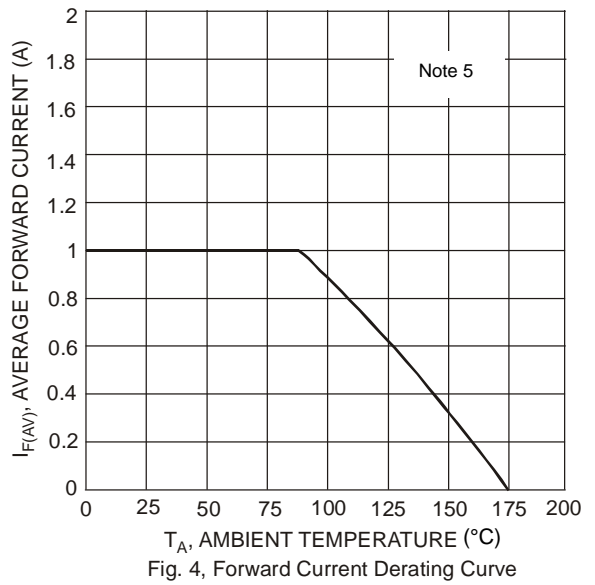
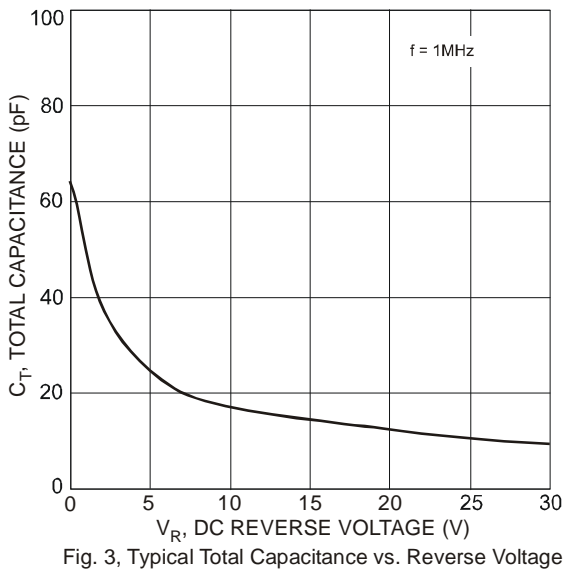
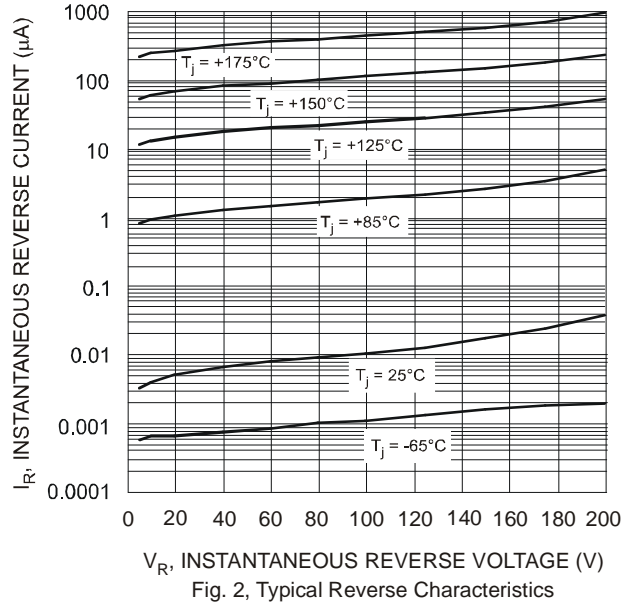
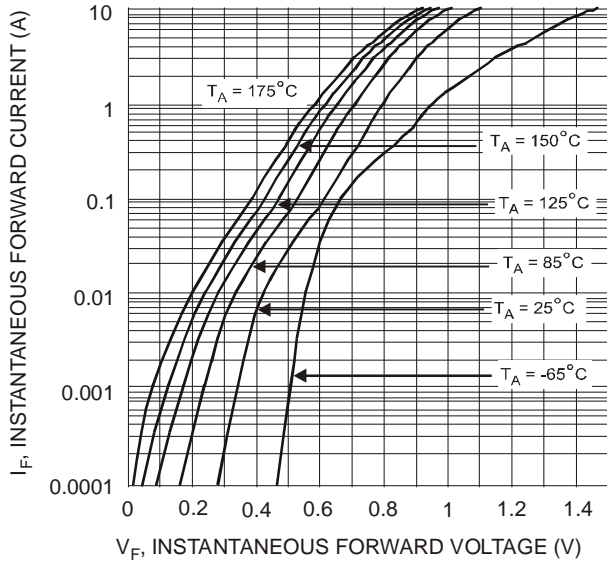
Electrical Characteristics (@T_A = +25°C, unless otherwise specified)

| Characteristic | Symbol | Min | Typ | Max | Unit | Test Condition |
|------------------------------------|--------------------|-----|-----|------|------|---|
| Reverse Breakdown Voltage (Note 7) | V _{(BR)R} | 200 | — | — | V | I _R = 8μA |
| Forward Voltage | V _F | — | — | 0.85 | V | I _F = 1.0A |
| Leakage Current (Note 7) | I _R | — | — | 2 | μA | V _R = 200V, T _A = +25°C |
| Total Capacitance | C _T | — | 23 | — | pF | V _R = 5V _{DC} , f = 1MHz |

- Notes:
- Part mounted on FR-4 board with 2 oz., minimum recommended copper pad layout, which can be found on our website at <http://www.diodes.com/package-outlines.html>. T_A = +25°C.
 - Theoretical R_{θJS} calculated from the top center of the die straight down to the PCB/cathode tab solder junction.
 - Short duration pulse test used to minimize self-heating effect.



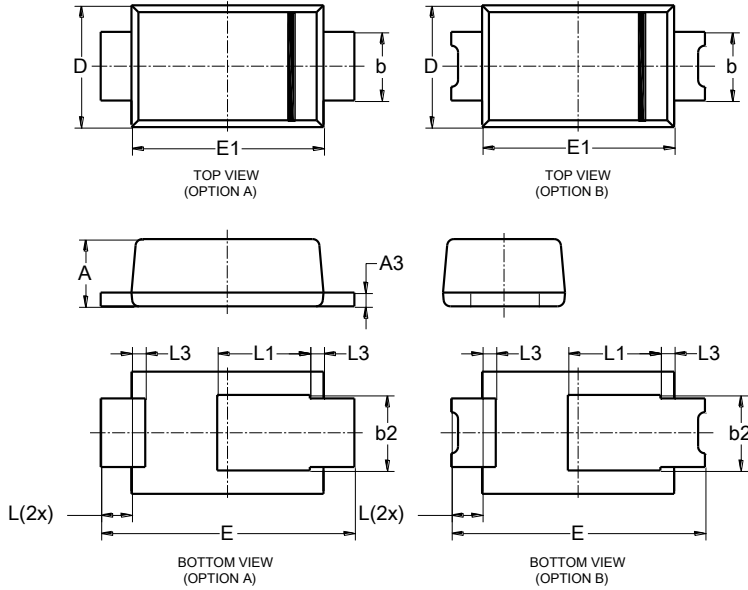
DFLS1200



Package Outline Dimensions

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

PowerDI123

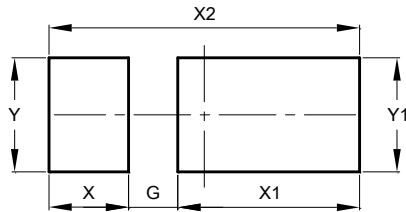


| PowerDI123 | | | |
|-----------------------------|-------|-------|------|
| Dim | Min | Max | Typ |
| A | 0.93 | 1.00 | 0.98 |
| A3 | 0.15 | 0.25 | 0.20 |
| b | 0.85 | 1.25 | 1.00 |
| b2 | 1.025 | 1.125 | 1.10 |
| D | 1.63 | 1.93 | 1.78 |
| E | 3.50 | 3.90 | 3.70 |
| E1 | 2.60 | 3.00 | 2.80 |
| L | 0.40 | 0.50 | 0.45 |
| L1 | 1.25 | 1.40 | 1.35 |
| L3 | 0.125 | 0.275 | 0.20 |
| All Dimensions in mm | | | |

Suggested Pad Layout

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

PowerDI123



| Dimensions | Value (in mm) |
|------------|---------------|
| G | 0.65 |
| X | 1.05 |
| X1 | 2.40 |
| X2 | 4.10 |
| Y | 1.50 |
| Y1 | 1.50 |

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