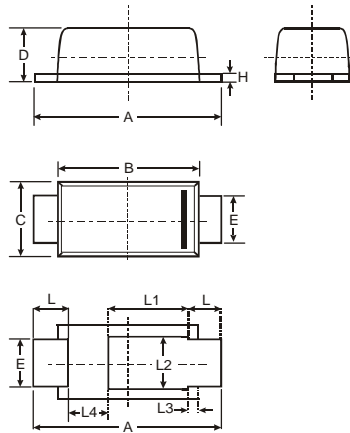


Introducing New Line of TVS & Standard Recovery Rectifiers, and Two Additional Schottkys in our PowerDI™123 Compact Power Package



PowerDI™123			
Dim	Min	Max	Typ
A	3.50	3.90	3.70
B	2.60	3.00	2.80
C	1.63	1.93	1.78
D	0.93	1.00	0.98
E	0.85	1.25	1.00
H	0.15	0.25	0.20
L	0.45	0.85	0.65
L1	—	—	1.35
L2	—	—	1.10
L3	—	—	0.20
L4	0.90	1.30	1.05
All Dimensions in mm			



Package Cross Section

Patent-pending construction results in industry leading thermal performance combined with increased miniaturization and efficiency

Product Offerings

- **DFLT5V0A - DFLT51A:** 225W Unidirectional Transient Voltage Suppressor Series.
- **DFLR1200 - DFLR1400:** 1-Ampere, 200V & 400V Standard Recovery Rectifier Series.
- **DFLS1200:** 1-Ampere, 200V Schottky Rectifier.
- **DFLS230LH:** 2-Ampere, 30V, Low V_F & Low I_R Schottky Rectifier.

Availability

- **Samples Now In Stock for DFLR1200, DFLR1400, DFLS1200, DFLS230LH and TVS Purple part numbers on Chart, page 3**
- **Production Quantity Lead Times for part numbers above: 6 - 10 weeks**
- **Samples Quantity Lead Times for other parts: up to 10 weeks**
- **Data Sheets Available NOW at: www.diodes.com**

To download data sheets, enter p/n in our website Product Data Sheet search, or click on p/n:

DFLT5V0A - DFLT51A:	5.0V - 51V
DFLS1200:	200V
DFLR1200 - DFLR1400:	200V - 400V
DFLS230LH:	30V

Many more products to be announced / released in the **PowerDI™123 Compact Power Package**

PowerDI is a trademark of Diodes Incorporated.

Product Descriptions

- **DFLT5V0A - DFLT51A:**
225W Unidirectional Transient Voltage Suppressor Series with Reverse Standoff Voltages from 5.0V to 51V.
- **DFLR1200 - DFLR1400:**
1-Ampere, Standard Recovery Rectifier Series with reverse voltage of 200V and 400V, respectively. Ideal compact replacements for the industry "workhorses" S1D & S1G types.
- **DFLS1200:**
1-Ampere, High Voltage Schottky Rectifier. This addition expands our high Voltage Schottky line in PowerDI™123 to 200V. Great for applications requiring the high reverse voltage and switching speed of an ultrafast rectifier but with the soft recovery characteristics and low V_F typically associated with Schottky technology.
- **DFLS230LH:**
2-Ampere, 30V, High Efficiency Schottky Rectifier with low V_F and low I_R . Designed for applications where a relatively low V_F is desired, but without the unwanted high leakage current typical of very low V_F Schottkys.

Package Highlights

- Occupies up to 50% less PCB area than competitive packages while offering higher power density
 - Small printed circuit board (PCB) footprint: Occupies only 6.75mm² PCB area
 - Low profile: Only 1mm Max Package Height, ideal for height limited applications.
 - **26% Lower than SOD-123**
 - **62% Lower than SMA**
- Qualified to AEC-Q101 standards for high reliability
- Green molding compound
- Pb-Free, 100% Matte Tin Plating (RoHS compliant)
- Withstands 260°C Solder Reflow
- Meets Moisture Sensitivity Level (MSL) 1
- Drop-in Compatible with:
 - **SOD-123**
 - **SOD-123FL**
 - **SMF**
 - **M1F**
 - **SOD87**

Power Density Ratings

- Flat, exposed lead frame package type.
- Highest Power Density rating vs. Competition
 - **PowerDI™123 = 282 mW/mm²**
 - **Powermite®1 = 232 mW/mm²**
 - **SOD123FL = 234 mW/mm²**
 - **SMA = 108 mW/mm²**
 - **SOD-123 = 60 mW/mm²**

Note: Comparison based on samples mounted on 1" x 1" copper pads on GETEK substrate.

Low Thermal Resistance

- **R θ JS = 6°C/W** theoretical.
- **R θ JA = 125°C/W** when mounted on 1" x 1", FR-4 PCB; 2 oz.
Copper pad layout as shown on Diodes, Inc. Suggested Pad Layout document: AP02001.pdf
For online viewers, please click: <http://www.diodes.com/datasheets/ap02001.pdf>

PowerDI is a trademark of Diodes Incorporated.

POWERMITE® is a registered trademark of Microsemi Corporation.

End Equipment Applications

- Automotive
- Disk drives
- Switch mode power supplies / DC-DC converters
- Battery chargers
- Inverters
- Notebook PCs
- Power management circuits
- Industrial controls
- Set top boxes
- Networking equipment, routers, hubs
- Computer peripherals; printers

Cross Reference Charts (Manufacturer Part Crosses)

Diodes Inc. TVS Crosses

Diodes Inc. PowerDI™123	Vishay SMF	On Semiconductor SMF
DFLT5V0A	SMF5V0A	SMF5.0A
DFLT6V0A	SMF6V0A	SMF6.0A
DFLT6V5A	SMF6V5A	SMF6.5A
DFLT7V0A	SMF7V0A	SMF7.0A
DFLT7V5A	SMF7V5A	SMF7.5A
DFLT8V0A	SMF8V0A	SMF8.0A
DFLT8V5A	SMF8V5A	SMF8.5A
DFLT9V0A	SMF9V0A	SMF9.0A
DFLT10A	SMF10A	SMF10A
DFLT11A	SMF11A	SMF11A
DFLT12A	SMF12A	SMF12A
DFLT13A	SMF13A	SMF13A
DFLT14A	SMF14A	SMF14A
DFLT15A	SMF15A	SMF15A
DFLT16A	SMF16A	SMF16A
DFLT17A	SMF17A	SMF17A
DFLT18A	SMF18A	SMF18A
DFLT20A	SMF20A	SMF20A
DFLT22A	SMF22A	SMF22A
DFLT24A	SMF24A	SMF24A
DFLT26A	SMF26A	SMF26A
DFLT27A	SMF27A	SMF27A
DFLT28A	SMF28A	SMF28A
DFLT30A	SMF30A	SMF30A
DFLT33A	SMF33A	SMF33A
DFLT36A	SMF36A	SMF36A
DFLT40A	SMF40A	SMF40A
DFLT43A	SMF43A	SMF43A
DFLT45A	SMF45A	SMF45A
DFLT48A	SMF48A	SMF48A
DFLT51A	SMF51A	SMF51A

Diodes Inc.'s PowerDI™123 Standard Recovery Rectifiers are a more compact replacement for the following industry standard parts:

Diodes Inc. P/N	Industry P/N
DFLR1200	S1D
DFLR1400	S1G

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