

Announcing Expansions of our Popular PowerDI™5 and PowerDI™123 Product Lines into Ultra-Fast and Standard Recovery Rectifiers



PowerDI™5



PowerDI™123



Package Cross Sections

Diodes, Inc.'s patent-pending flat lead frame heat-sink solder pad results in higher power dissipation and surge capabilities in a compact low profile package

Product Highlights

- **PDU340, PDU420, PDU540, PDU620 and PDU620CT**
 - Ideal for ultra-fast switching, high temperature applications such as switched mode converters/inverters for consumers, automotive and telecommunication industries
 - Provides reverse blocking voltages up to 400V
 - Qualified to the industry's most rigorous AEC-Q101 (automotive) standards for high reliability and is compliant with all RoHS environmental standards
- **DFLU1200 and DFLU1400**
 - Ultra-Fast switching time of less than 25nS with reverse blocking up to 400V, all in a small low profile PowerDI™123 footprint package
 - Qualified to the industry's most rigorous AEC-Q101 (automotive) standards for high reliability and is compliant with all RoHS environmental standards
- **DFLR1600**
 - Provides standard recovery switching with the highest breakdown of 600V compared to the DFLR1200 and DFLR1400 predecessors
 - Qualified to the industry's most rigorous AEC-Q101 (automotive) standards for high reliability and is compliant with all RoHS environmental standards

Circuit Applications

- Output Rectifiers
- Free Wheeling Diodes
- Catch Diode
- Reverse Polarity Protection
- Boost Diode

Availability

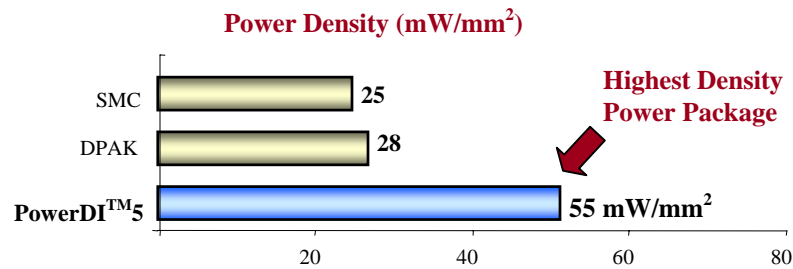
- **Samples:** Now Available!
- **Production Quantity Lead Time:** 6 – 10 weeks
- **Data Sheets Available NOW at:** www.diodes.com

To download selected data sheet, enter p/n in our website Product Data Sheet search, or click,

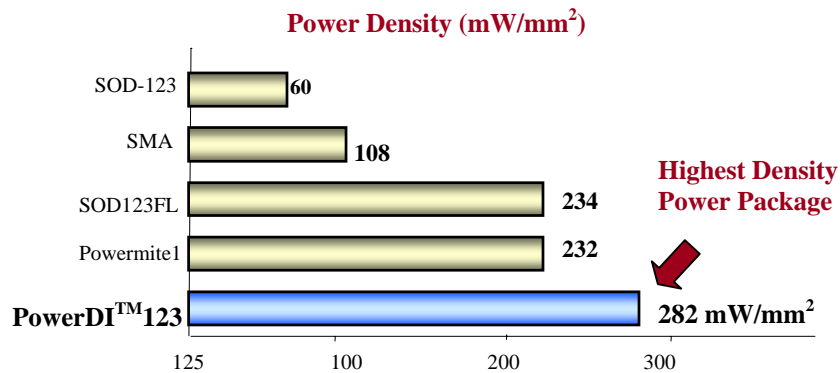
PDU340	3 Amperes / 400 Volts Ultra-Fast
PDU420	4 Amperes / 200 Volts Ultra-Fast
PDU540	5 Amperes / 400 Volts Ultra-Fast
PDU620	6 Amperes / 200 Volts Ultra-Fast
PDU620CT	6 Amperes (2 x 3 Amperes) / 200 Volts Ultra-Fast, dual common cathode
DFLU1200	1 Amperes / 200 Volts Ultra-Fast
DFLU1400	1 Amperes / 400 Volts Ultra-Fast
DFLR1600	1 Amperes / 600 Volts Standard Recovery

Thermal Performance Benefits

PowerDI™5 offers twice the Power Density over Competitive Package Types –



PowerDI™123 flat, exposed lead frame package type offers the best Power Density among Competitive Package Types –



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

Crosses from Industry Parts

Table comparing PDU, DFLU, and DFLR Series Families to competitors of similar or larger physical size

Diodes		Vishay		Onsemi		ST Micro		Industry Standard	
P/N	Package	P/N	Package	P/N	Package	P/N	Package	P/N	Package
PDU340	PowerDI™5	MURS340	SMC	MURD340	Dpak	SMBYT03	SMC	MURD340	Dpak
PDU420	PowerDI™5	-	-	-	-	BYW4200B	Dpak	-	-
						SMBYW04-200	SMC		
PDU540	PowerDI™5	Industry First!							
PDU620	PowerDI™5	Industry First!							
PDU620CT	PowerDI™5	FEPB6DT	Dpak	MURD620CT	Dpak	-	-	MURD620CT	Dpak
DFLU1200	PowerDI™123	ES1D	SMA	MURA120T3G	SMA	STPR120A	SMA	ES1D	SMA
		ES07D	SMF						
DFLU1400	PowerDI™123	-	-	MURA140T3G	SMA	-	-	ES1G	SMA
DFLR1600	PowerDI™123	S07J	SMF	-	-	-	-	S1J	SMA

End-User Applications

- Switch Mode Power Supplies (SMPS)
- Industrial and Telecom Power Supplies
- Disk Drives
- Inverters
- Power Management Circuits
- Set Top Boxes
- Networking Equipment, Routers and Hubs
- High Temperature Automotive Applications

PowerDI is a trademark of Diodes Incorporated.

Examples of Circuit Applications

	Forward Converter	Flyback Power Supply	Boost Converter
Circuit Schematic			
	Output Rectifiers	Free-Wheeling Diode	Boost Diode

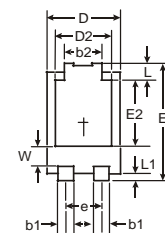
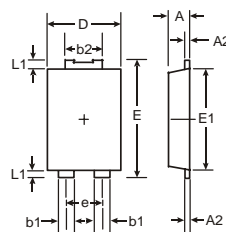
Solderability & Environmental Highlights

- RoHS Compliant
- “Green” (No Bromine, Antimony) Molding Compound
- Pb-Free, 100% Matte Tin Plating
- Withstands 260°C Solder Reflow
- Meets Moisture Sensitivity Level (MSL) 1

Package Outline Dimensions (mm)



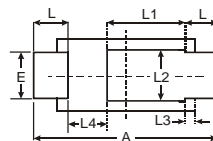
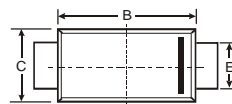
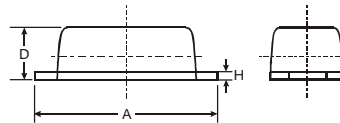
PowerDI™5



PowerDI™5		
Dim	Min	Max
A	1.05	1.15
A2	0.33	0.43
b1	0.80	0.99
b2	1.70	1.88
D	3.90	4.05
D2	3.05 NOM	
E	6.40	6.60
e	1.84 NOM	
E1	5.30	5.45
E2	3.55 NOM	
L	0.75	0.95
L1	0.50	0.65
W	1.20	1.50
All Dimensions in mm		



PowerDI™123



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			

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