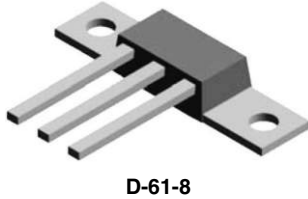
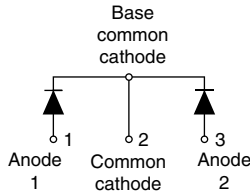


Schottky Rectifier New Generation 3 D-61 Package, 2 x 40 A

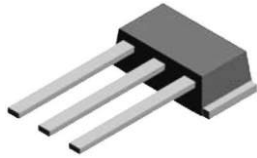
VS-83CNQ...A



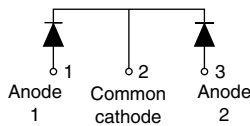
D-61-8



VS-83CNQ...ASM



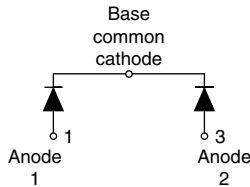
D-61-8-SM



VS-83CNQ...ASL



D-61-8-SL



FEATURES

- 175 °C T_J operation
- Center tap module
- Low forward voltage drop
- High frequency operation
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability
- New fully transfer-mold low profile, small footprint, high current package
- Designed and qualified for industrial level

DESCRIPTION

The center tap Schottky rectifier module series has been optimized for low reverse leakage at high temperature. The proprietary barrier technology allows for reliable operation up to 175 °C junction temperature. Typical applications are in switching power supplies, converters, freewheeling diodes, and reverse battery protection.

PRODUCT SUMMARY

I _{F(AV)}	2 x 40 A
V _R	80 V/100 V

MAJOR RATINGS AND CHARACTERISTICS

SYMBOL	CHARACTERISTICS	VALUES	UNITS
I _{F(AV)}	Rectangular waveform	80	A
V _{R(RM)}	Range	80/100	V
I _{FSM}	t _p = 5 μs sine	7000	A
V _F	40 Apk, T _J = 125 °C (per leg)	0.67	V
T _J	Range	- 55 to 175	°C

VOLTAGE RATINGS

PARAMETER	SYMBOL	VS-83CNQ080A	VS-83CNQ100A	UNITS
Maximum DC reverse voltage	V _R	80	100	V
Maximum working peak reverse voltage	V _{R(M)}			

VS-83CNQ080A, VS-83CNQ100A Series



Vishay High Power Products

Schottky Rectifier
New Generation 3 D-61 Package, 2 x 40 A

ABSOLUTE MAXIMUM RATINGS					
PARAMETER	SYMBOL	TEST CONDITIONS		VALUES	UNITS
Maximum average forward current See fig. 5	$I_{F(AV)}$	50 % duty cycle at $T_C = 132\text{ }^\circ\text{C}$, rectangular waveform		80	A
Maximum peak one cycle non-repetitive surge current per leg See fig. 7	I_{FSM}	5 μs sine or 3 μs rect. pulse	Following any rated load condition and with rated V_{RRM} applied	7000	
		10 ms sine or 6 ms rect. pulse		720	
Non-repetitive avalanche energy per leg	E_{AS}	$T_J = 25\text{ }^\circ\text{C}$, $I_{AS} = 1\text{ A}$, $L = 30\text{ mH}$		15	mJ
Repetitive avalanche current per leg	I_{AR}	Current decaying linearly to zero in 1 μs Frequency limited by T_J maximum $V_A = 1.5 \times V_R$ typical		1	A

ELECTRICAL SPECIFICATIONS					
PARAMETER	SYMBOL	TEST CONDITIONS		VALUES	UNITS
Maximum forward voltage drop per leg See fig. 1	$V_{FM}^{(1)}$	40 A	$T_J = 25\text{ }^\circ\text{C}$	0.81	V
		80 A		1.00	
		40 A	$T_J = 125\text{ }^\circ\text{C}$	0.67	
		80 A		0.82	
Maximum reverse leakage current per leg See fig. 2	$I_{RM}^{(1)}$	$T_J = 25\text{ }^\circ\text{C}$	$V_R = \text{Rated } V_R$	1.5	mA
		$T_J = 125\text{ }^\circ\text{C}$		35	
Maximum junction capacitance per leg	C_T	$V_R = 5\text{ }V_{DC}$ (test signal range 100 kHz to 1 MHz), $25\text{ }^\circ\text{C}$		1400	pF
Typical series inductance per leg	L_S	Measured lead to lead 5 mm from package body		5.5	nH
Maximum voltage rate of change	dV/dt	Rated V_R		10 000	V/ μs

Note

(1) Pulse width < 300 μs , duty cycle < 2 %

THERMAL - MECHANICAL SPECIFICATIONS					
PARAMETER	SYMBOL	TEST CONDITIONS		VALUES	UNITS
Maximum junction and storage temperature range	T_J, T_{Stg}			- 55 to 175	$^\circ\text{C}$
Maximum thermal resistance, junction to case per leg	R_{thJC}	DC operation See fig. 4		0.85	$^\circ\text{C/W}$
Maximum thermal resistance, junction to case per package		DC operation		0.42	
Typical thermal resistance, case to heatsink (D-61-8 only)	R_{thCS}	Mounting surface, smooth and greased Device flatness < 5 mils		0.30	
Approximate weight				7.8	g
				0.28	oz.
Mounting torque (D-61-8 only)	minimum maximum		Recommended hardware 3M stainless screw	12 (10)	kgf · cm
				24 (20)	(lbf · in)
Marking device		Case style D-61-8		83CNQ080A	
				83CNQ100A	
		Case style D-61-8-SM		83CNQ080ASM	
				83CNQ100ASM	
		Case style D-61-8-SL		83CNQ080ASL	
83CNQ100ASL					



VS-83CNQ080A, VS-83CNQ100A Series

Schottky Rectifier
New Generation 3 D-61 Package, 2 x 40 A

Vishay High Power Products

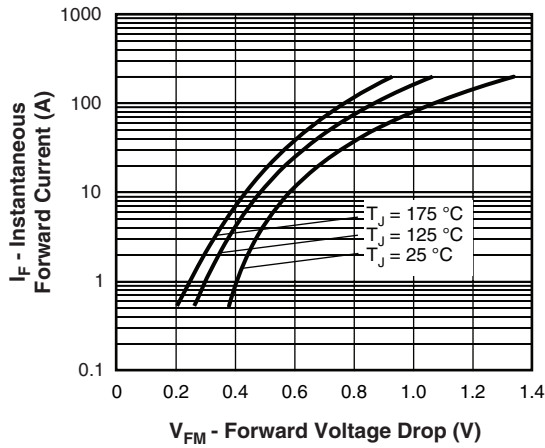


Fig. 1 - Maximum Forward Voltage Drop Characteristics (Per Leg)

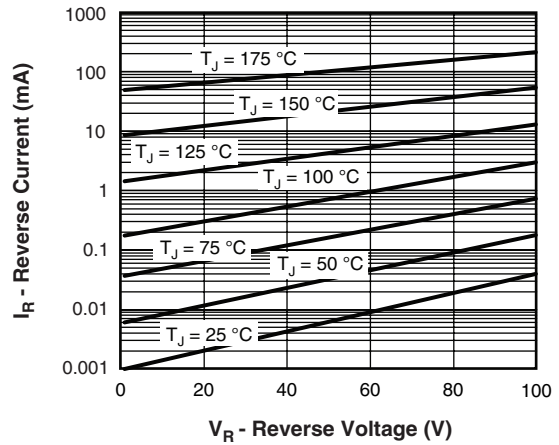


Fig. 2 - Typical Values of Reverse Current vs. Reverse Voltage (Per Leg)

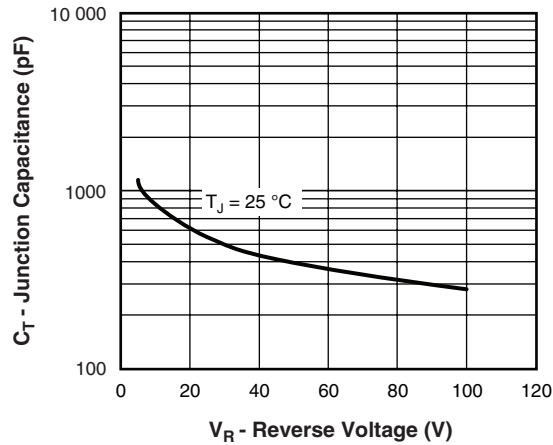


Fig. 3 - Typical Junction Capacitance vs. Reverse Voltage (Per Leg)

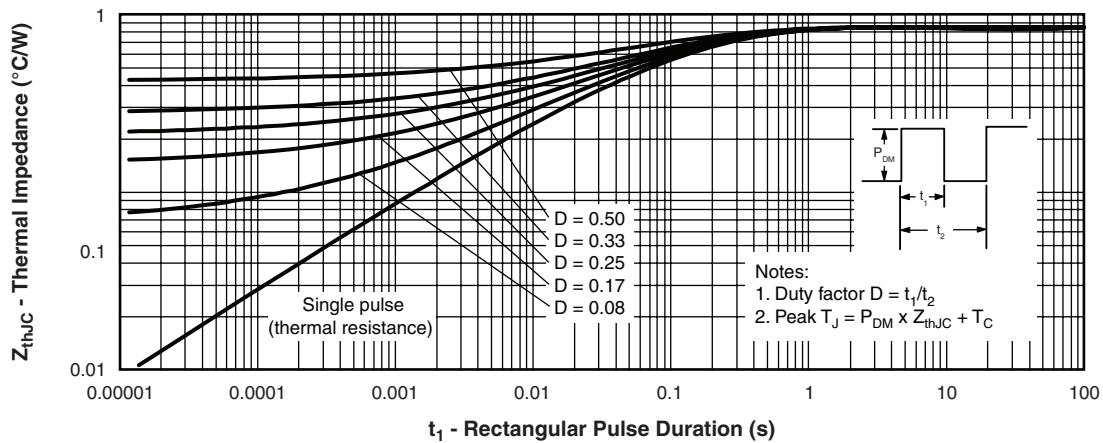


Fig. 4 - Maximum Thermal Impedance Z_{thJC} Characteristics (Per Leg)

VS-83CNQ080A, VS-83CNQ100A Series



Vishay High Power Products

Schottky Rectifier
New Generation 3 D-61 Package, 2 x 40 A

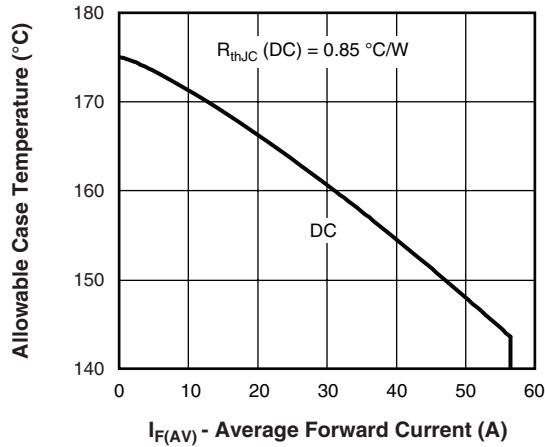


Fig. 5 - Maximum Allowable Case Temperature vs. Average Forward Current (Per Leg)

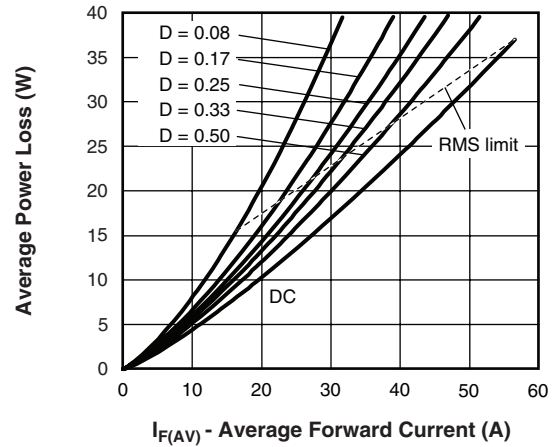


Fig. 6 - Forward Power Loss Characteristics (Per Leg)

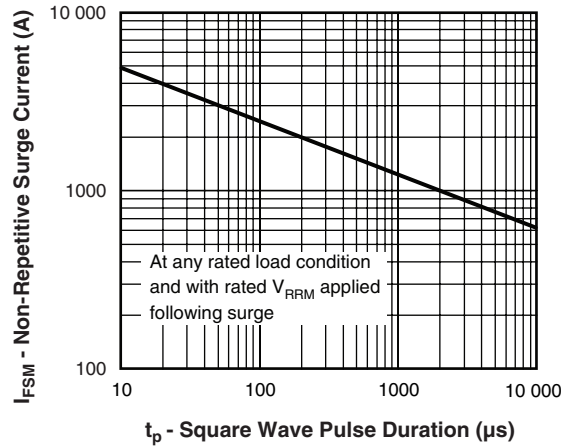


Fig. 7 - Maximum Non-Repetitive Surge Current (Per Leg)

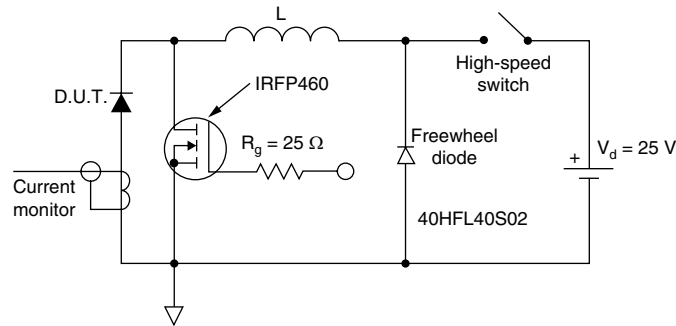


Fig. 8 - Unclamped Inductive Test Circuit

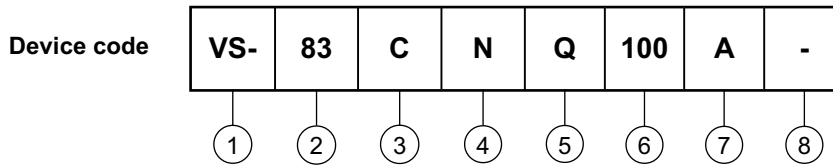


VS-83CNQ080A, VS-83CNQ100A Series

Schottky Rectifier
New Generation 3 D-61 Package, 2 x 40 A

Vishay High Power Products

ORDERING INFORMATION TABLE



- 1** - HPP product suffix
- 2** - Current rating (83 = 80 A)
- 3** - Circuit configuration:
C = Common cathode
- 4** - Package:
N = D-61
- 5** - Schottky "Q" series
- 6** - Voltage ratings ————

080 = 80 V
100 = 100 V
- 7** - Package style:
 - A = D-61-8
 - ASM = D-61-8-SM
 - ASL = D-61-8-SL
- 8** -
 - None = Standard production
 - PbF = Lead (Pb)-free (D-61-8 only)

Standard pack quantity: A = 10 pieces; ASM/ASL = 20 pieces

LINKS TO RELATED DOCUMENTS	
Dimensions	www.vishay.com/doc?95354
Part marking information	www.vishay.com/doc?95356
SPICE model	www.vishay.com/doc?95290



Disclaimer

All product specifications and data are subject to change without notice.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

Vishay disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.

单击下面可查看定价，库存，交付和生命周期等信息

[>>Vishay\(威世\)](#)