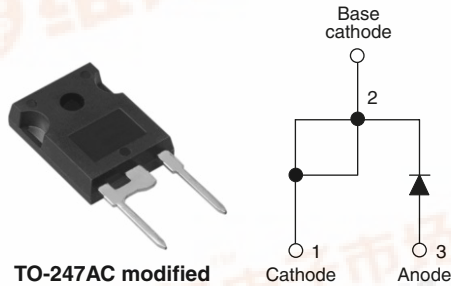


Input Rectifier Diode, 60 A



DESCRIPTION/FEATURES

The 60EPS16 rectifier High Voltage Series has been optimized for very low forward voltage drop, with moderate leakage. The glass passivation technology used has reliable operation up to 150 °C junction temperature.

Typical applications are in input rectification and these products are designed to be used with Vishay HPP switches and output rectifiers which are available in identical package outlines.

This product has been designed and qualified for industrial level.

PRODUCT SUMMARY

V_F at 60 A	1.07 V
I_{FSM}	950 A
V_{RRM}	1600 V

MAJOR RATINGS AND CHARACTERISTICS

SYMBOL	CHARACTERISTICS	VALUES	UNITS
$I_{F(AV)}$	Sinusoidal waveform	60	A
V_{RRM}		1600	V
I_{FSM}		950	A
V_F	60 A, $T_J = 25\text{ °C}$	1.07	V
T_J		- 40 to 150	°C

VOLTAGE RATINGS

PART NUMBER	V_{RRM} , MAXIMUM PEAK REVERSE VOLTAGE V	V_{RSM} , MAXIMUM NON-REPETITIVE PEAK REVERSE VOLTAGE V	I_{RRM} AT 150 °C mA
60EPS16	1600	1700	1

ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	TEST CONDITIONS	VALUES	UNITS
Maximum average forward current	$I_{F(AV)}$	$T_C = 118\text{ °C}$, 180° conduction half sine wave	60	A
Maximum peak one cycle non-repetitive surge current	I_{FSM}	10 ms sine pulse, rated V_{RRM} applied	950	
		10 ms sine pulse, no voltage reapplied	1100	
Maximum I^2t for fusing	I^2t	10 ms sine pulse, rated V_{RRM} applied	4512	A ² s
		10 ms sine pulse, no voltage reapplied	6300	
Maximum $I^2\sqrt{t}$ for fusing	$I^2\sqrt{t}$	$t = 0.1$ to 10 ms, no voltage reapplied	63 000	A ² √s

60EPS16 High Voltage Series



Vishay High Power Products 供应商
Vishay High Power Products 60A Rectifier Diode, 60 A

ELECTRICAL SPECIFICATIONS					
PARAMETER	SYMBOL	TEST CONDITIONS		VALUES	UNITS
Maximum forward voltage drop	V _{FM}	30 A, T _J = 25 °C		1.0	V
		60 A, T _J = 25 °C		1.07	
Forward slope resistance	r _t	T _J = 150 °C		3.96	mΩ
Threshold voltage	V _{F(TO)}			0.74	V
Maximum reverse leakage current	I _{RM}	T _J = 25 °C	V _R = Rated V _{RRM}	0.1	mA
		T _J = 150 °C		1.0	

THERMAL - MECHANICAL SPECIFICATIONS					
PARAMETER		SYMBOL	TEST CONDITIONS	VALUES	UNITS
Maximum junction and storage temperature range		T _J , T _{Stg}		- 40 to 150	°C
Maximum thermal resistance, junction to case		R _{thJC}	DC operation	0.35	°C/W
Maximum thermal resistance, junction to ambient		R _{thJA}		40	
Typical thermal resistance, case to heatsink		R _{thCS}	Mounting surface, smooth and greased	0.2	
Approximate weight				6	g
				0.21	oz.
Mounting torque	minimum			6.0 (5)	kgf · cm (lbf · in)
	maximum			12 (10)	
Marking device			Case style TO-247AC modified (JEDEC)	60EPS16	

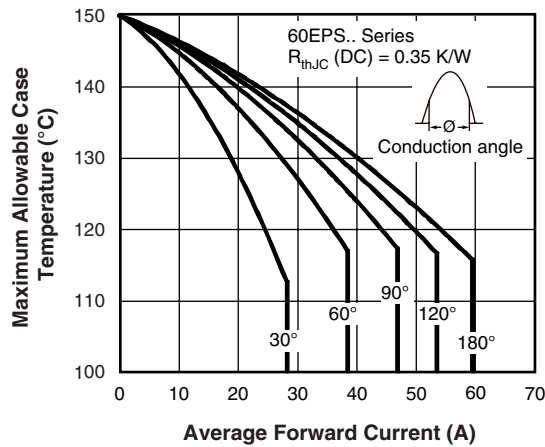


Fig. 1 - Current Rating Characteristics

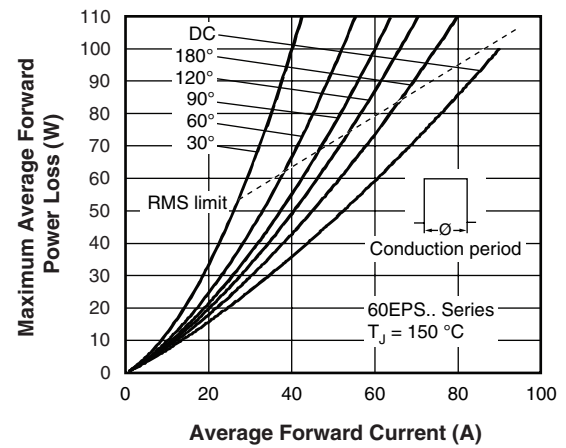


Fig. 4 - Forward Power Loss Characteristics

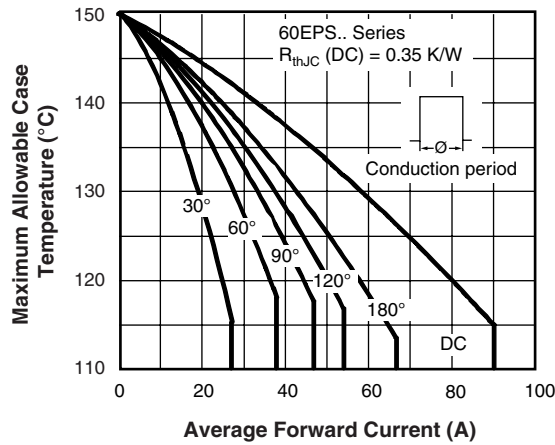


Fig. 2 - Current Rating Characteristics

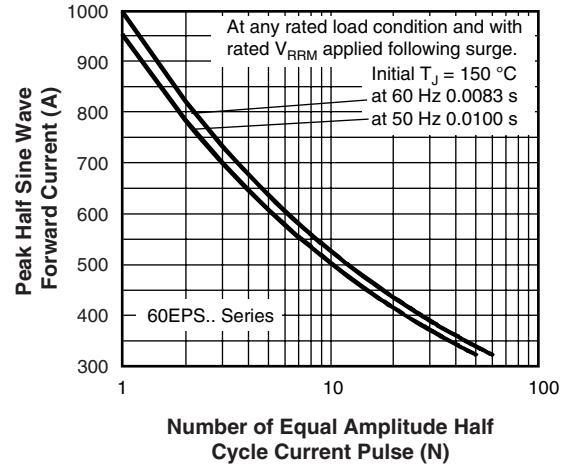


Fig. 5 - Maximum Non-Repetitive Surge Current

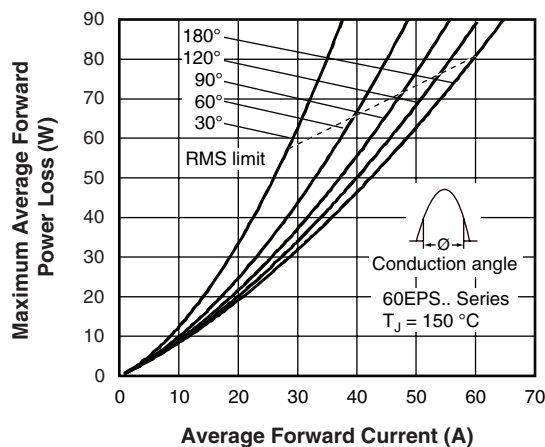


Fig. 3 - Forward Power Loss Characteristics

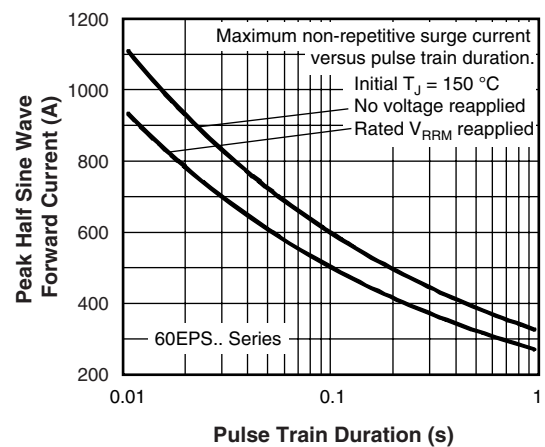


Fig. 6 - Maximum Non-Repetitive Surge Current

60EPS16 High Voltage Series

Vishay High Power Products, Inc. Rectifier Diode, 60 A

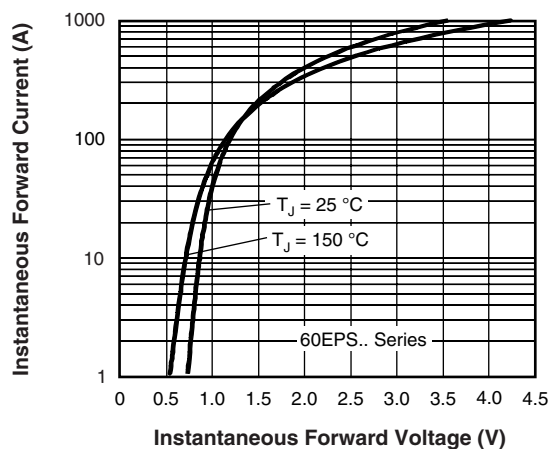


Fig. 7 - Forward Voltage Drop Characteristics

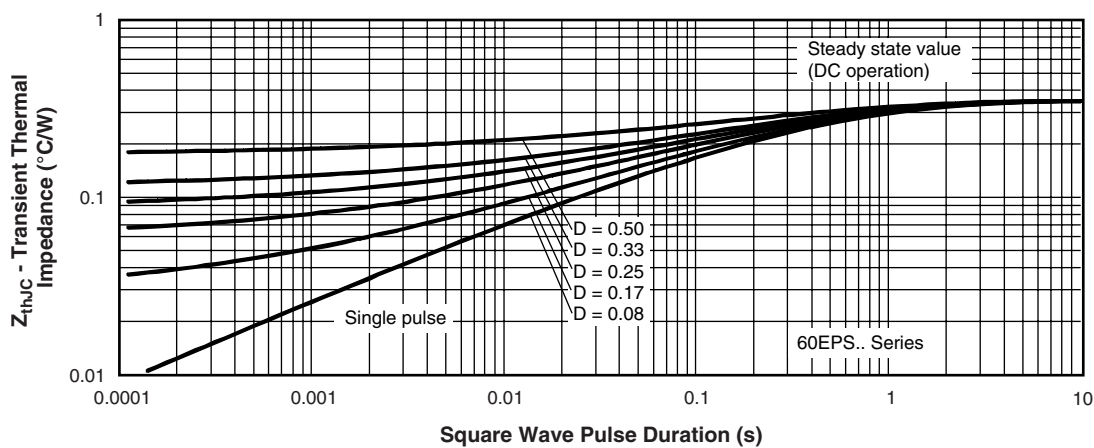


Fig. 8 - Thermal Impedance Z_{thJC} Characteristics



60EPS16 High Voltage Series

[查询"60EPS16 High Voltage Series"供应商](#)

High Voltage Rectifier Diode, 60 A Vishay High Power Products

ORDERING INFORMATION TABLE

Device code	60	E	P	S	16	-
	1	2	3	4	5	6
	1	-	-	-	-	-
	2	-	-	-	-	-
	3	-	-	-	-	-
	4	-	-	-	-	-
	5	-	-	-	-	-
	6	-	-	-	-	-

1 - Current rating (60 = 60 A)

2 - Circuit configuration:
E = Single diode

3 - Package:
P = TO-247AC modified

4 - Type of silicon:
S = Standard recovery rectifier

5 - Voltage rating (16 = 1600 V)

6 -
• None = Standard production
• PbF = Lead (Pb)-free

LINKS TO RELATED DOCUMENTS	
Dimensions	http://www.vishay.com/doc?95253
Part marking information	http://www.vishay.com/doc?95255



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