

BYV26DGP, BYV26EGP

Vishay General Semiconductor

Glass Passivated Ultrafast Plastic Rectifier

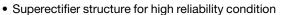
Superectifier®

DO-15 (DO-204AC)

www.vishay.com

PRIMARY CHARACTERISTICS					
I _{F(AV)} 1.0 A					
V _{RRM}	800 V, 1000 V				
I _{FSM}	30 A				
t _{rr}	75 ns				
V _F at I _F	1.3 V				
T _J max. 175 °C					
Package DO-15 (DO-204AC)					
Circuit configuration	Single				

FEATURES





RoHS

· Ultrafast reverse recovery time

- Low forward voltage drop
- Low switching losses, high efficiency
- · High forward surge capability
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

TYPICAL APPLICATIONS

For use in high frequency rectification and freewheeling application in switching mode converters and inverters for consumer, computer and telecommunication.

MECHANICAL DATA

Case: DO-15 (DO-204AC), molded epoxy over glass body Molding compound meets UL 94 V-0 flammability rating Base P/N-E3 - RoHS-compliant, commercial grade

Terminals: matte tin plated leads, solderable per

J-STD-002 and JESD 22-B102

E3 suffix meets JESD 201 class 1A whisker test

Polarity: color band denotes cathode end

MAXIMUM RATINGS (T _A = 25 °C unless otherwise noted)					
PARAMETER	SYMBOL	BYV26DGP	BYV26EGP	UNIT	
Maximum repetitive peak reverse voltage	V_{RRM}	800	1000	V	
Maximum RMS voltage	V _{RMS}	560	700	V	
Maximum DC blocking voltage	V_{DC}	800	1000	V	
Maximum average forward rectified current 0.375" (9.5 mm) lead length (fig. 1)	I _{F(AV)}	1.0		А	
Peak forward surge current 10 ms single half sine-wave superimposed on rated load	I _{FSM}	30		А	
Non repetitive peak reverse energy	E _{RSM} (1)	10		mJ	
Operating junction and storage temperature range	T _J , T _{STG}	-65 to	°C		

Note

 $^{(1)}$ Peak reverse energy measured at I_R = 400 mA, T_J = T_J max. on inductive load, t = 20 μs



Typical junction capacitance

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15

рF

ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)						
PARAMETER	TEST C	ONDITIONS	SYMBOL	BYV26DGP	BYV26EGP	UNIT
Minimum avalanche breakdown voltage	100 μΑ		V_{BR}	900	1100	V
Maximum instantaneous forward voltage	1.0 A	T _J = 25 °C	V	2.5		V
	1.0 A	T _J = 175 °C	V _F	1.	3	v
Maximum DC reverse current at rated DC blocking voltage		T _A = 25 °C	I_	I _R 5.0 150		μА
		T _A = 165 °C	'R			
Max. reverse recovery time	$I_F = 0.5 A_s$ $I_{rr} = 0.25 A_s$, I _R = 1.0 A, A	t _{rr}	7	5	ns

THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)					
PARAMETER	SYMBOL	BYV26DGP	BYV26EGP	UNIT	
Typical thermal resistance	R _{0JA} (1)	70		- °C/W	
	R _{0JL} (2)	16			

 C_J

Notes

4.0 V, 1 MHz

ORDERING INFORMATION (Example)						
PREFERRED P/N UNIT WEIGHT (g) PREFERRED PACKAGE CODE		BASE QUANTITY	DELIVERY MODE			
BYV26EGP-E3/54	0.428	54	4000	13" diameter paper tape and reel		
BYV26EGP-E3/73	0.428	73	2000	Ammo pack packaging		

⁽¹⁾ Thermal resistance from junction to ambient at 0.375" (9.5 mm) lead length, mounted on PCB with 0.5" x 0.5" (12 mm x 12 mm) copper pads

⁽²⁾ Thermal resistance from junction to lead at 0.375" (9.5 mm) lead length with both leads attached to heatsink

100



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RATINGS AND CHARACTERISTICS CURVES (T_A = 25 °C unless otherwise noted)

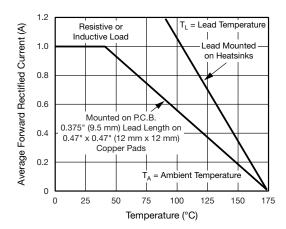
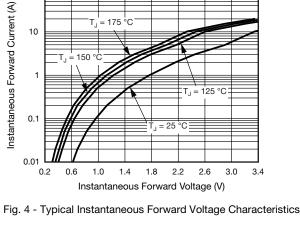


Fig. 1 - Maximum Forward Current Derating Curve



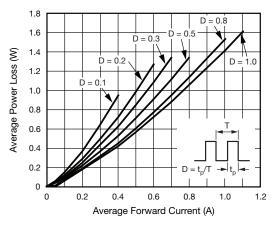


Fig. 2 - Forward Power Loss Characteristics

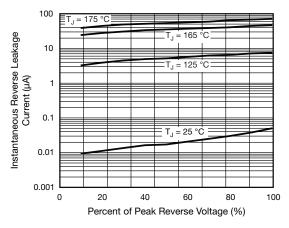


Fig. 5 - Typical Reverse Leakage Characteristics

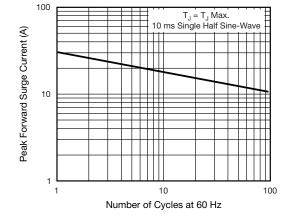


Fig. 3 - Maximum Non-Repetitive Peak Forward Surge Current

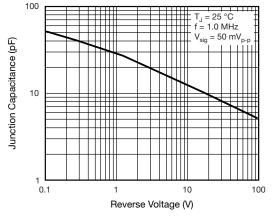


Fig. 6 - Typical Junction Capacitance



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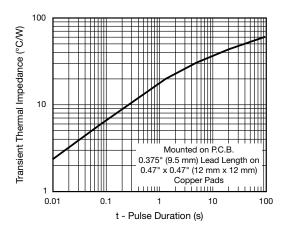
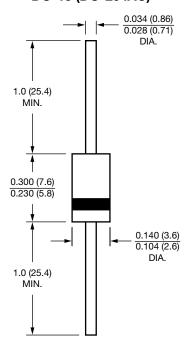


Fig. 7 - Typical Transient Thermal Impedance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

DO-15 (DO-204AC)





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