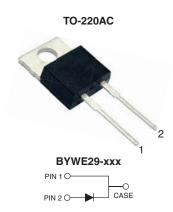
BYWE29-50, BYWE29-100, BYWE29-150, BYWE29-200

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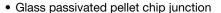
Ultrafast Rectifier



PRIMARY CHARACTERISTICS					
I _{F(AV)}	8.0 A				
V_{RRM}	50 V, 100 V, 150 V, 200 V				
I _{FSM}	100 A				
t _{rr}	25 ns				
V_{F}	0.8 V				
T_J max.	150 °C				
Package	TO-220AC				
Diode variations	Single die				

FEATURES

Power pack



- · Ultrafast recovery time
- · Low switching losses, high efficiency
- Low forward voltage drop
- · 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 rectifier of switching mode power supplies, inverters, freewheeling diodes, DC/DC converters, and other power switching application.

MECHANICAL DATA

Case: TO-220AC

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: As marked

Mounting Torque: 10 in-lbs max.

MAXIMUM RATINGS (T _C = 25 °C unless otherwise noted)									
PARAMETER	SYMBOL	BYWE29-50	BYWE29-100	BYWE29-150	BYWE29-200	UNIT			
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	V			
Maximum RMS voltage	V_{RMS}	35	70	105	140	V			
Maximum DC blocking voltage	V_{DC}	50	100	150	200	V			
Maximum average forward rectified current at $T_C = 105 ^{\circ}C$	I _{F(AV)}	8.0							
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	100							
Operating and storage temperature range	T _J , T _{STG}	-65 to +150							

ELECTRICAL CHARACTERISTICS (T _C = 25 °C unless otherwise noted)								
PARAMETER	TEST CC	ST CONDITIONS SYMBOL BYWE29-50 BYWE29-100 BYWE29-150 BYWE29-		BYWE29-200	UNIT			
Maximum instantaneous	$I_F = 20 \text{ A}$	$T_J = 25 ^{\circ}C$	V _F ⁽¹⁾	1.3				V
forward voltage	$I_F = 8.0 A$	T _J = 150 °C	VF \''	0.8				
Maximum DC reverse current		$T_C = 25 ^{\circ}C$	I_	10				μА
at rated DC blocking voltage		T _C = 100 °C	I _R	500				
Maximum reverse recovery time	$I_F = 1 A, V_1$ dI/dt = 100 $I_{rr} = 10 \%$	λ/μs,	t _{rr}	25		25		ns
Typical junction capacitance	4.0 V, 1 M	Hz	CJ	45			pF	

Note

(1) Pulse test: 300 μs pulse width, 1 % duty cycle



BYWE29-50, BYWE29-100, BYWE29-150, BYWE29-200

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THERMAL CHARACTERISTICS (T _C = 25 °C unless otherwise noted)						
PARAMETER	SYMBOL	BYWE29-50	BYWE29-100	BYWE29-150	BYWE29-200	UNIT
Typical thermal resistance from junction to case per leg	$R_{\theta JC}$	2.5 °C/			°C/W	

ORDERING INFORMATION (Example)								
PACKAGE	PREFERRED P/N	RRED P/N UNIT WEIGHT (g) PACKAGE CODE BASE QUANTITY DELIVERY MOI						
TO-220AC	BYWE29-200-E3/45	1.80	45	50/tube	Tube			

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

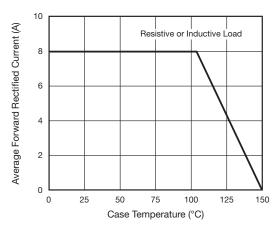


Fig. 1 - Maximum Forward Current Derating Curve

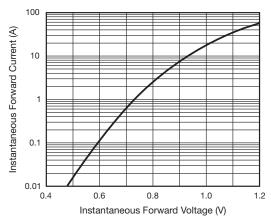


Fig. 3 - Typical Instantaneous Forward Charateristics

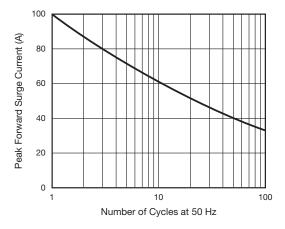


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

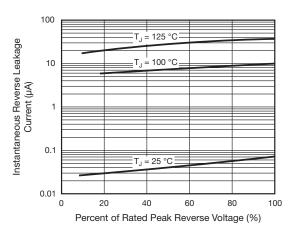


Fig. 4 - Typical Reverse Leakage Charateristics

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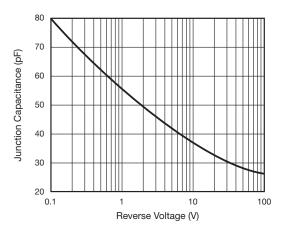
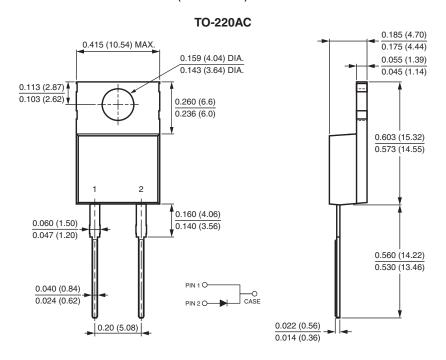


Fig. 5 - Typical Junction Capacitance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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