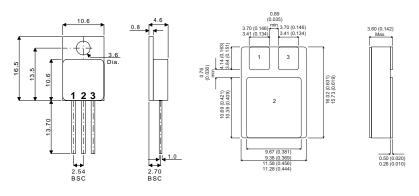


BYV32-50M BYV32-100M BYV32-150M BYV32-200M

### **MECHANICAL DATA**

Dimensions in mm

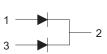


**TO220 METAL** 

SMD1 **CERAMIC SURFACE MOUNT** 

### **ELECTRICAL CONNECTIONS**

#### Common Cathode Common Anode **Series Connection** BYV32-xxxM BYV32-xxxAM BYV32-xxxRM



1 = A<sub>1</sub> Anode 1 2 = K Cathode

3 = A<sub>2</sub> Anode 2

1 = K<sub>1</sub> Cathode 1 2 = A Anode

3 = K<sub>2</sub> Cathode 2

1 = K<sub>1</sub> Cathode 1 2 = Centre Tap

 $3 = A_2$  Anode

# HERMETICALLY SEALED **DUAL FAST RECOVERY** SILICON RECTIFIER FOR HI-REL APPLICATIONS

- STANDARD (COMMON CATHODE)
- COMMON ANODE
- SERIES CONNECTION

### **FEATURES**

- HERMETIC TO220 METAL OR CERAMIC SURFACE MOUNT PACKAGE
- SCREENING OPTIONS AVAILABLE
- ALL LEADS IOLATED FROM CASE
- VOLTAGE RANGE 50 TO 200V
- AVERAGE CURRENT 20A
- ULTRA FAST REVERSE RECOVERY TIME  $-t_{rr} = 35ns Max$
- VERY LOW SWITCHING LOSSES

Applications include secondary rectification in high frequency switching power supplies.

			BYV32	BYV32	BYV32	BYV32
<b>ABSOLUTE MAXIMUM RATINGS</b> (T <sub>case</sub> = 25°C unless otherwise stated)		-50M	-100M	-150M	-200M	
$V_{RRM}$	Peak Repetitive Reverse Voltage		50V	100V	150V	200V
$V_{RWM}$	Working Peak Reverse Voltage		50V	100V	150V	200V
$V_R$	Continuous Reverse Voltage		50V	100V	150V	200V
$I_{FRM}$	Repetitive Peak Forward Current $t_p =$	10μs		20	0A	
$I_{F(AV)}$	Average Forward Current T <sub>case</sub>	<sub>e</sub> = 70°C		20	PΑ	
	(switching operation, $\delta$ = 0.5, both diodes conducting)					
$I_{FSM}$	Surge Non Repetitive Forward Current $t_p =$	10 ms		80	PΑ	
$T_{stg}$	Storage Temperature Range			-65 to	200°C	
$T_j$	Maximum Operating Junction Temperature			200	)°C	

E-mail: sales@semelab.co.uk

**Semelab plc.** Telephone +44(0)1455 556565. Fax +44(0)1455 552612.

Website: http://www.semelab.co.uk



BYV32-50M BYV32-100M BYV32-150M BYV32-200M

# **ELECTRICAL CHARACTERISTICS** (Per Diode) (T<sub>case</sub> = 25°C unless otherwise stated)

Parameter		Test Conditions		Min.	Тур.	Max.	Unit
I <sub>R</sub>	Reverse Current	$V_R = V_{RWM}$	T <sub>j</sub> = 25°C			30	μΑ
		$V_R = V_{RWM}$	T <sub>j</sub> = 100°C			0.6	mA
		I <sub>F</sub> = 8A	T <sub>C</sub> = 25°C			1.1	
V <sub>F</sub> *	Forward Voltage	I <sub>F</sub> = 20A	$T_C = 25^{\circ}C$			1.5	V
		I <sub>F</sub> = 5A	T <sub>C</sub> = 100°C			0.95	
t <sub>rr</sub> **	Reverse Recovery Time	I <sub>F</sub> = 1A di / dt = 50A/μs	V <sub>R</sub> = 30V			35	ns
Q <sub>rr</sub> **	Recovered Charge	$I_F = 2A$ di / dt = 20A/µs	V <sub>R</sub> = 30V			15	nC
V <sub>FP</sub> **	Forward Recovery Overvoltage	di / dt = 10A/μs	I <sub>F</sub> = 1A		1.0		V

<sup>\*</sup> Pulse Test:  $t_p \le 300 \mu s$ , duty cycle  $\le 2\%$ .

## THERMAL CHARACTERISTICS (TO220 METAL CASE)

Ь	Thormal Posistance Junction Case		1.6	°C/W
I K <sub>θ</sub> JC <sup>†</sup>	Thermal Resistance Junction – Case		1.6	°C/VV

† Both diodes conducting.

Semelab Plc reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by Semelab is believed to be both accurate and reliable at the time of going to press. However Semelab assumes no responsibility for any errors or omissions discovered in its use. Semelab encourages customers to verify that datasheets are current before placing orders.

Semelab plc. Telephone +44(0)1455 556565. Fax +44(0)1455 552612. Document Number 7099

E-mail: <a href="mailto:sales@semelab.co.uk">sales@semelab.co.uk</a> Website: <a href="http://www.semelab.co.uk">http://www.semelab.co.uk</a> Issue 2

<sup>\*\*</sup> AC Parameters Guaranteed by Design