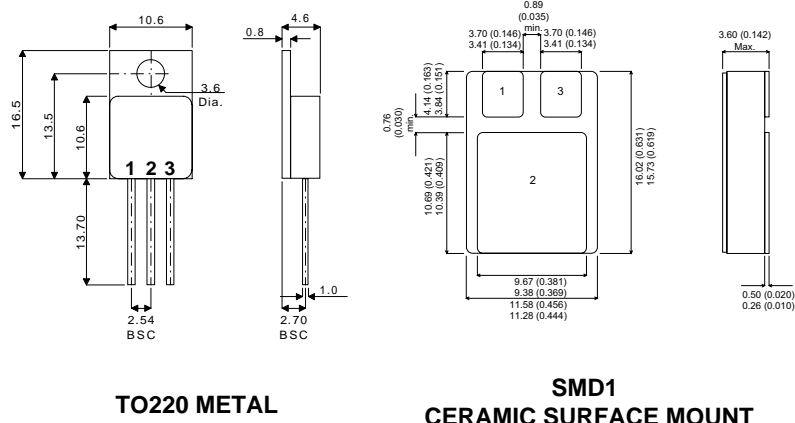


## MECHANICAL DATA

Dimensions in mm



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

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

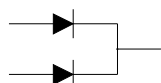
## FEATURES

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

## ELECTRICAL CONNECTIONS

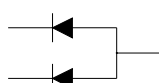
**Common Cathode**    **Common Anode**    **Series Connection**

**BYV32-xxxM**



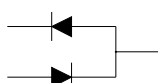
1 = A<sub>1</sub> Anode 1  
 2 = K Cathode  
 3 = A<sub>2</sub> Anode 2

**BYV32-xxxAM**



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

**BYV32-xxxRM**



1 = K<sub>1</sub> Cathode 1  
 2 = Centre Tap  
 3 = A<sub>2</sub> Anode

Applications include secondary rectification in high frequency switching power supplies.

## ABSOLUTE MAXIMUM RATINGS ( $T_{\text{case}} = 25^\circ\text{C}$ unless otherwise stated)

		BYV32 -50M	BYV32 -100M	BYV32 -150M	BYV32 -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 $t_p = 10\mu\text{s}$	200A			
$I_{F(AV)}$	Average Forward Current $T_{\text{case}} = 70^\circ\text{C}$ (switching operation, $\delta = 0.5$ , both diodes conducting)	20A			
$I_{FSM}$	Surge Non Repetitive Forward Current $t_p = 10\text{ms}$	80A			
$T_{stg}$	Storage Temperature Range	$-65$ to $200^\circ\text{C}$			
$T_j$	Maximum Operating Junction Temperature	$200^\circ\text{C}$			

**ELECTRICAL CHARACTERISTICS** (Per Diode) ( $T_{case} = 25^{\circ}C$  unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$I_R$ Reverse Current	$V_R = V_{RWM}$ $T_j = 25^{\circ}C$			30	$\mu A$
	$V_R = V_{RWM}$ $T_j = 100^{\circ}C$			0.6	mA
$V_F$ * Forward Voltage	$I_F = 8A$ $T_C = 25^{\circ}C$			1.1	V
	$I_F = 20A$ $T_C = 25^{\circ}C$			1.5	
	$I_F = 5A$ $T_C = 100^{\circ}C$			0.95	
$t_{rr}$ Reverse Recovery Time	$I_F = 2A$ $V_R = 30V$ $di / dt = 20A/\mu s$			35	ns
	$I_F = 1A$ $V_R = 30V$ $di / dt = 50A/\mu s$			50	ns
$Q_{rr}$ Recovered Charge	$I_F = 2A$ $V_R = 30V$ $di / dt = 20A/\mu s$			15	nC
$V_{FP}$ Forward Recovery Overvoltage	$di / dt = 10A/\mu s$ $I_F = 1A$		1.0		V

\* Pulse Test:  $t_p \leq 300\mu s$ , duty cycle  $\leq 2\%$ .

**THERMAL CHARACTERISTICS (TO220 METAL CASE)**

$R_{\theta JC}^{\dagger}$ Thermal Resistance Junction – Case			1.6	$^{\circ}C/W$
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$\dagger$  Both diodes conducting.