BYV32–50M
BYV32–100M
BYV32–150M
BYV32–200M

HERMETICALLY SEALED DUAL FAST RECOVERY SILICON RECTIFIER FOR HI–REL APPLICATIONS

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

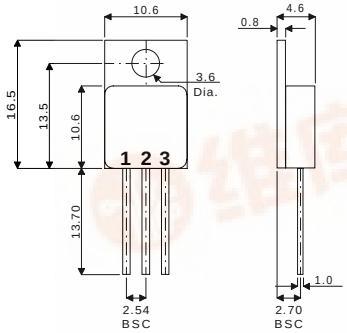
FEATURES

- 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} = 35ns
- VERY LOW SWITCHING LOSSES

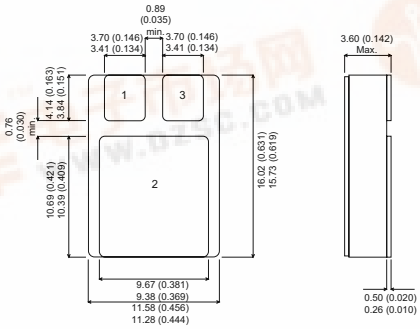
Applications include secondary rectification in high frequency switching power supplies.

MECHANICAL DATA

Dimensions in mm

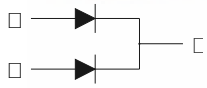
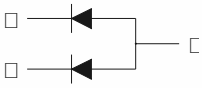
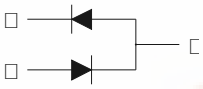


TO220 METAL



SMD1
CERAMIC SURFACE MOUNT

ELECTRICAL CONNECTIONS

Common Cathode	Common Anode	Series Connection
BYV32-xxxM	BYV32-xxxAM	BYV32-xxxRM
		
1 = A_1 Anode 1	1 = K_1 Cathode 1	1 = K_1 Cathode 1
2 = K Cathode	2 = A Anode	2 = Centre Tap
3 = A_2 Anode 2	3 = K_2 Cathode 2	3 = A_2 Anode

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°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 = 10µs	200A			
$I_{F(AV)}$	Average Forward Current	T_{case} = 70°C	20A			
	(switching operation, δ = 0.5, both diodes conducting)					
I_{FSM}	Surge Non Repetitive Forward Current	t_p = 10 ms	80A			
T_{stg}	Storage Temperature Range		–65 to 200°C			
T_j	Maximum Operating Junction Temperature		200°C			

BYV32–50M
BYV32–100M
BYV32–150M
BYV32–200M

ELECTRICAL CHARACTERISTICS (Per Diode) (T_{case} = 25°C unless otherwise stated)

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

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

THERMAL CHARACTERISTICS (TO220 METAL CASE)

$R_{\theta JC}$†	Thermal Resistance Junction – Case			1.6	°C/W

† Both diodes conducting.