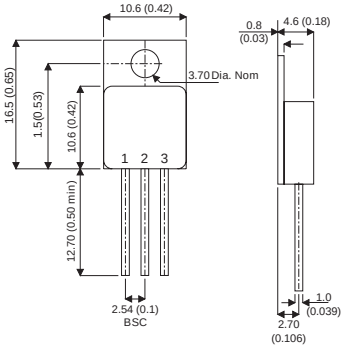
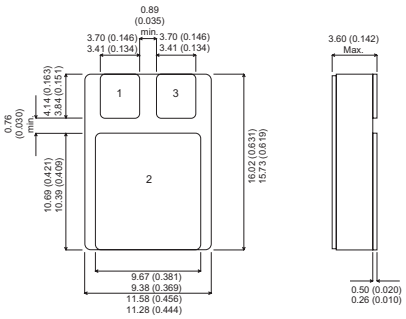
BYV29–300M BYV29–300SMD
BYV29–400M BYV29–400SMD
BYV29–500M BYV29–500SMD

MECHANICAL DATA
Dimensions in mm



TO220 (TO-257AB)



SMD1 (TO-276AB)
CERAMIC SURFACE MOUNT

HERMETICALLY SEALED FAST RECOVERY SILICON RECTIFIER FOR HI–REL APPLICATIONS

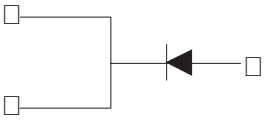
FEATURES

- **HERMETIC TO220 METAL OR CERAMIC SURFACE MOUNT PACKAGES**
- **SCREENING OPTIONS AVAILABLE**
- **ALL LEADS ISOLATED FROM CASE**
- **VOLTAGE RANGE 50 TO 200V**
- **AVERAGE CURRENT 8A**
- **VERY LOW REVERSE RECOVERY TIME – t_{rr} = 35ns**
- **VERY LOW SWITCHING LOSSES**

Applications include secondary rectification in high frequency switching power supplies

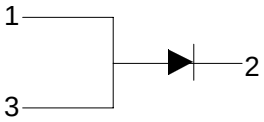
ELECTRICAL CONNECTIONS

BYV29xxxM



1 = K Cathode
2 = K Cathode
3 = A Anode

BYV29xxxSMD



1 = A Anode
2 = K Cathode
3 = A Anode

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C unless otherwise stated)

			BYV29 –300M	BYV29 –400M	BYV29 –500M
V_{RRM}	Peak Repetitive Reverse Voltage		300V	400V	500V
V_{RWM}	Working Peak Reverse Voltage		200V	30V	400V
V_R	Continuous Reverse Voltage		200V	300V	400V
I_{FRM}	Repetitive Peak Forward Current	t_p = 10µs	200A		
$I_{F(AV)}$	Average Forward Current	T_{case} = 70°C	8A		
	(switching operation, δ = 0.5)				
I_{FSM}	Surge Non Repetitive Forward Current	t_p = 10 ms	100A		
T_{stg}	Storage Temperature Range		–65 to 200°C		
T_j	Maximum Operating Junction Temperature		200°C		

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BYV29–300M BYV29–300SMD
BYV29–400M BYV29–400SMD
BYV29–500M BYV29–500SMD

ELECTRICAL CHARACTERISTICS (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 = 1A di / dt = 50A/µs	V_R = 30V			35	ns
		I_F = 2A di / dt = 20A/µs	V_R = 30V			50	
Q_{rr}	Recovered Charge	I_F = 2A di / dt = 20A/µs	V_R = 30V			15	nC
V_{FP}	Forward Recovery Overvoltage	I_F = 1A	di / dt = 0A/µs		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				2.6	°C/W

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