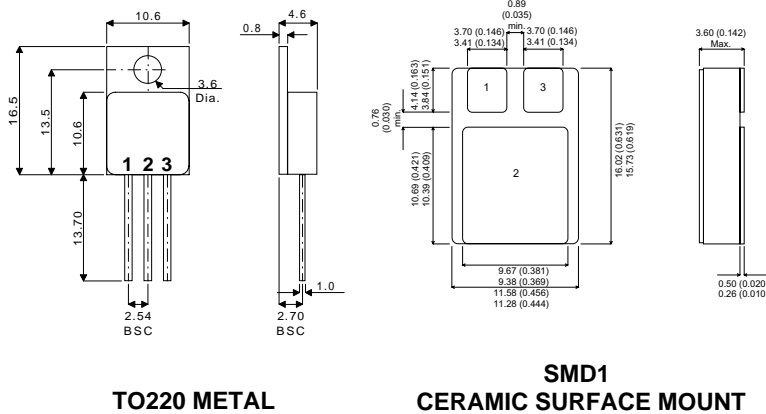


**MECHANICAL DATA**

Dimensions in mm



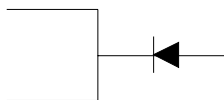
**HERMETICALLY SEALED  
FAST RECOVERY  
SILICON RECTIFIER  
FOR HI-REL APPLICATIONS**

**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 –  $t_{rr} = 35\text{ns}$
- VERY LOW SWITCHING LOSSES

**ELECTRICAL CONNECTIONS**

**BYV29xxxM**



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

Applications include secondary rectification in high frequency switching power supplies

<b>ABSOLUTE MAXIMUM RATINGS</b> ( $T_{case} = 25^{\circ}\text{C}$ unless otherwise stated)		<b>BYV29 -3000M</b>	<b>BYV29 -400M</b>	<b>BYV29 -500M</b>
$V_{RRM}$	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 $t_p = 10\mu\text{s}$		200A	
$I_{F(AV)}$	Average Forward Current $T_{case} = 70^{\circ}\text{C}$ (switching operation, $\delta = 0.5$ )		9A	
$I_{FSM}$	Surge Non Repetitive Forward Current $t_p = 10\text{ms}$		100A	
$T_{stg}$	Storage Temperature Range		-65 to 200°C	
$T_j$	Maximum Operating Junction Temperature		200°C	

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$I_R$ Reverse Current	$V_R = V_{RWM}$ $T_j = 25^{\circ}\text{C}$			30	$\mu\text{A}$
	$V_R = V_{RWM}$ $T_j = 100^{\circ}\text{C}$			0.6	mA
$V_F$ * Forward Voltage	$I_F = 8\text{A}$ $T_C = 25^{\circ}\text{C}$			1.1	V
	$I_F = 20\text{A}$ $T_C = 25^{\circ}\text{C}$			1.5	
	$I_F = 5\text{A}$ $T_C = 100^{\circ}\text{C}$			0.95	
$t_{rr}$ Reverse Recovery Time	$I_F = 1\text{A}$ $V_R = 30\text{V}$ $di / dt = 50\text{A}/\mu\text{s}$			35	ns
	$I_F = 2\text{A}$ $V_R = 30\text{V}$ $di / dt = 20\text{A}/\mu\text{s}$			50	
$Q_{rr}$ Recovered Charge	$I_F = 2\text{A}$ $V_R = 30\text{V}$ $di / dt = 20\text{A}/\mu\text{s}$			15	nC
$V_{FP}$ Forward Recovery Overvoltage	$I_F = 1\text{A}$ $di / dt = 0\text{A}/\mu\text{s}$		1.0		V

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

**THERMAL CHARACTERISTICS (TO220 METAL CASE)**

$R_{\theta JC}^{\dagger}$ Thermal Resistance Junction – Case			2.6	$^{\circ}\text{C}/\text{W}$
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