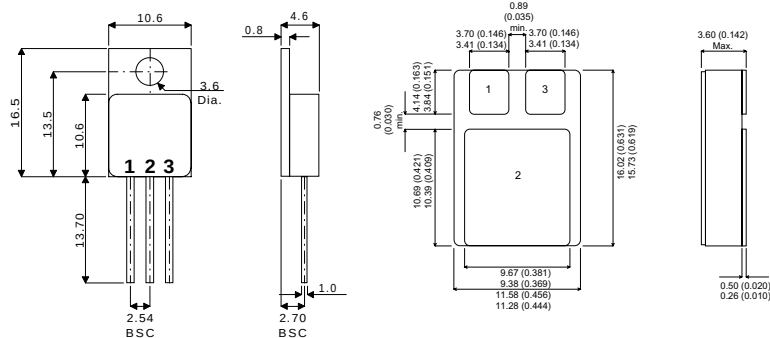


MECHANICAL DATA

Dimensions in mm

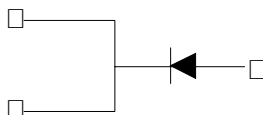


TO220 METAL

SMD1
CERAMIC SURFACE MOUNT

ELECTRICAL CONNECTIONS

BYV29xxxM



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

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

Applications include secondary rectification in high frequency switching power supplies

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

		BYV29 -3000M	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 $t_p = 10\mu\text{s}$		200A	
$I_{\text{F(AV)}}$	Average Forward Current $T_{\text{case}} = 70^{\circ}\text{C}$ (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	μA
	$V_R = V_{RWM}$ $T_j = 100^{\circ}\text{C}$			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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