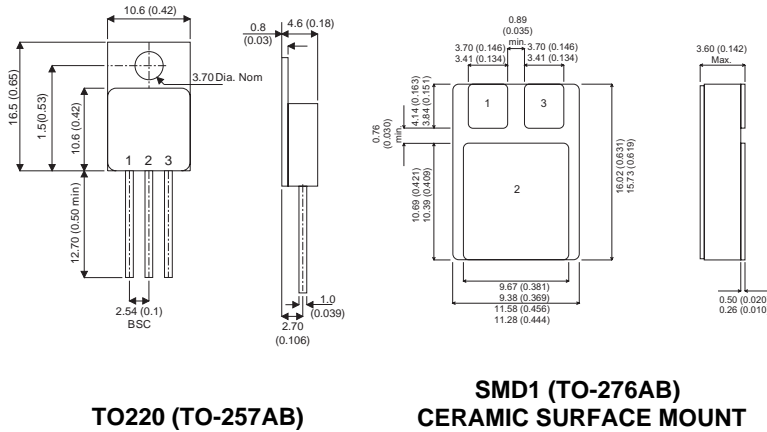


MECHANICAL DATA
Dimensions in mm



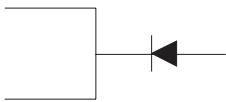
HERMETICALLY SEALED
FAST RECOVERY
SILICON RECTIFIER
FOR HI-REL APPLICATIONS

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

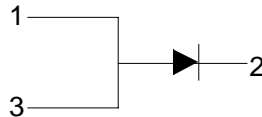
ELECTRICAL CONNECTIONS

BYV29xxxM



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

BYV29xxxSMD



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

Applications include secondary rectification in high frequency switching power supplies

ABSOLUTE MAXIMUM RATINGS ($T_{\text{case}} = 25^{\circ}\text{C}$ 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 $t_p = 10\mu\text{s}$		200A	
$I_{\text{F(AV)}}$	Average Forward Current $T_{\text{case}} = 70^{\circ}\text{C}$ (switching operation, $\delta = 0.5$)		8A	
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	

Semelab Plc reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by Semelab is believed to be both accurate and reliable at the time of going to press. However Semelab assumes no responsibility for any errors or omissions discovered in its use. Semelab encourages customers to verify that datasheets are current before placing orders.

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)

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