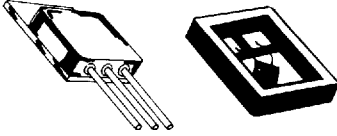


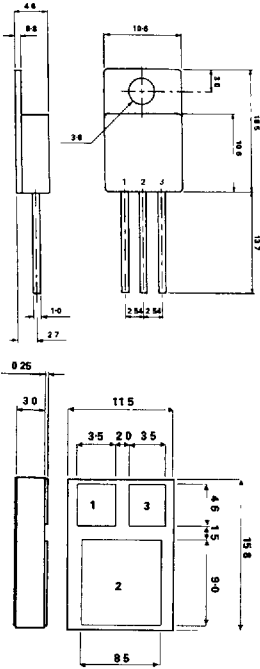
SEMELAB PLC

T-03-17
SEMELAB



BYW29 – 50M
BYW29 – 100M
BYW29 – 150M
BYW29 – 200M

MECHANICAL DATA
Dimensions in mm



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



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

FEATURES

- HERMETIC TO 220 METAL OR CERAMIC SURFACE MOUNT PACKAGES
- SCREENING OPTIONS AVAILABLE
- ALL LEADS ISOLATED FROM CASE
- VOLTAGE RANGE 50 to 200V
- AVERAGE CURRENT 8 AMPS
- VERY LOW REVERSE RECOVERY TIME - t_{rr} 35ns
- VERY LOW SWITCHING LOSSES

Applications include secondary rectification in high frequency switching power supplies.

TO220M – TO220 Metal Package
TO220SM – TO220 Ceramic Surface Mount Package

ABSOLUTE MAXIMUM RATINGS

		BYW29 -50M	BYW29 -100M	BYW29 -150M	BYW29 -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 ($t = 10\mu s$)	200A			
I_{FAVI}	Average forward current $T_{CASE} = 70^\circ C$ (switching operation, $\delta = 0.5$)	8A			
I_{FSM}	Surge non-repetitive forward current ($t = 10ms$)	80A			
T_{sig}	Storage temperature	-65 to 200°C			
T_j	Maximum operating junction temperature	200°C			

BYW29 – 50M
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BYW29 – 200M

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SEMELAB PLC

ELECTRICAL CHARACTERISTICS ($T_{CASE} = 25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Test Conditions	Min. Typ. Max.	Unit
I_R Reverse current	$V_R = V_{RWM}$ $T_J = 25^{\circ}\text{C}$ $T_J = 100^{\circ}\text{C}$	30 0.6	μA mA
V_F^* Forward Voltage	$I_F = 20\text{A}$ $I_F = 5\text{A}$ $T_{CASE} = 25^{\circ}\text{C}$ $T_{CASE} = 100^{\circ}\text{C}$	1.5 0.95	V V
t_{rr} Reverse recovery time	$I_F = 1\text{A}$ di/dt = 50A/ μs $V_R = 30\text{V}$ $I_F = 2\text{A}$ di/dt = 20A/ μs $V_R = 30\text{V}$	35 50	ns ns
Q_{rr} Recovered charge	$I_F = 2\text{A}$ di/dt = 20A/ μs $V_R = 30\text{V}$	15	nC
V_{FP} Forward recovery overvoltage	$I_F = 1\text{A}$ di/dt = 10A/ μs	1.0	V

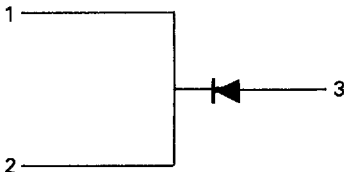
* Pulsed: pulse duration $\leq 300\mu\text{s}$, duty cycle $\leq 2\%$

THERMAL CHARACTERISTICS (TO220 metal case)

$R_{th(j-c)}$ Thermal resistance junction to case	Max 2.6 $^{\circ}\text{C/W}$
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ELECTRICAL CONNECTIONS

BYW29 – xxxM



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