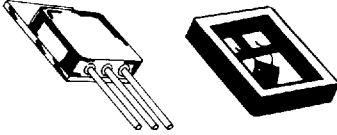


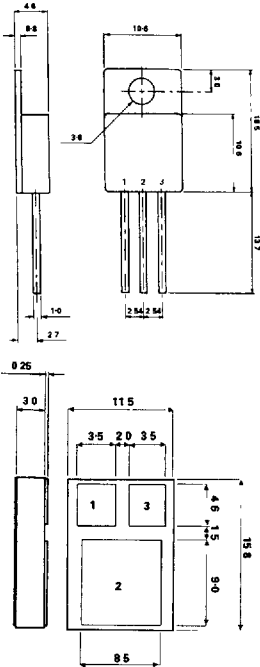
SEMELAB PLC

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

SEMELAB

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 |

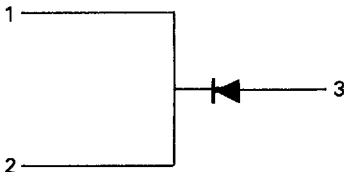
* Pulsed: pulse duration $\leq 300\mu\text{s}$, duty cycle $\leq 2\%$

THERMAL CHARACTERISTICS (TO220 metal case)

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

ELECTRICAL CONNECTIONS

BYW29 – xxxM



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