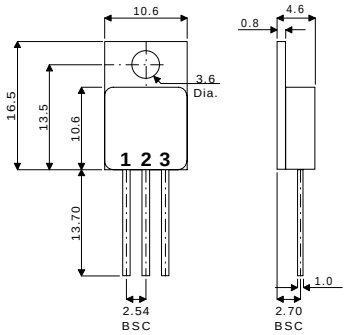
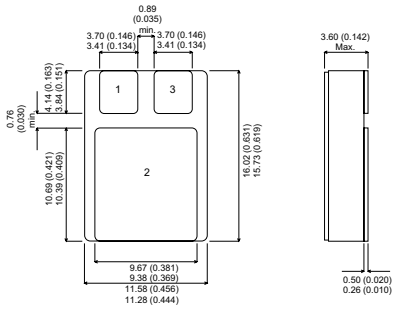
BYV34–300M
BYV34–400M
BYV34–500M

MECHANICAL DATA
Dimensions in mm



TO220 METAL



SMD1
CERAMIC SURFACE MOUNT

HERMETICALLY SEALED DUAL FAST RECOVERY SILICON RECTIFIER FOR HI–REL APPLICATIONS

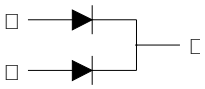
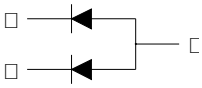
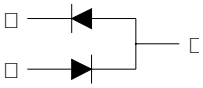
- **STANDARD (COMMON CATHODE)**
- **COMMON ANODE**
- **SERIES CONNECTION**

FEATURES

- **HERMETIC TO220 METAL OR CERAMIC SURFACE MOUNT PACKAGE**
- **SCREENING OPTIONS AVAILABLE**
- **ALL LEADS ISOLATED FROM CASE**
- **VOLTAGE RANGE 300 TO 500V**
- **AVERAGE CURRENT 20A**
- **VERY LOW REVERSE RECOVERY TIME – t_{rr} = 35ns**
- **VERY LOW SWITCHING LOSSES**

Applications include secondary rectification in high frequency switching power supplies.

ELECTRICAL CONNECTIONS

Common Cathode	Common Anode	Series Connection
BYV34-xxxM	**BYV34-xxxAM**	**BYV34-xxxRM**
		
1 = A_1 Anode 1	**1 = K_1 Cathode 1**	**1 = K_1 Cathode 1**
2 = K Cathode	**2 = A Anode**	**2 = Centre Tap**
3 = A_2 Anode 2	**3 = K_2 Cathode 2**	**3 = A_2 Anode**

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C unless otherwise stated)

			BYV34 –300M	BYV34 –400M	BYV34 –500M
V_{RRM}	Peak Repetitive Reverse Voltage		300V	400V	500V
V_{RWM}	Working Peak Reverse Voltage		300V	300V	400V
V_R	Continuous Reverse Voltage		300V	300V	400V
I_{FRM}	Repetitive Peak Forward Current	t_p = 10µs		200A	
$I_{F(AV)}$	Average Forward Current	T_{case} = 70°C		20A	
	(switching operation, δ = 0.5, both diodes conducting)				
I_{FSM}	Surge Non Repetitive Forward Current	t_p = 10 ms		100A	
T_{stg}	Storage Temperature Range			–65 to 200°C	
T_j	Maximum Operating Junction Temperature			200°C	

Semelab plc. Telephone +44(0)1455 556565. Fax +44(0)1455 552612.
E-mail: sales@semelab.co.uk Website: http://www.semelab.co.uk

SEME LAB

BYV34–300M
BYV34–400M
BYV34–500M

ELECTRICAL CHARACTERISTICS (per Diode) (T_{case} = 25°C unless otherwise stated)

Parameter		Test Conditions		Min.	Typ.	Max.	Unit
I_R	Reverse Current	$V_R = V_{RWM}$	T_j = 25°C			50	µA
		$V_R = V_{RWM}$	T_j = 100°C			0.6	mA
V_F *	Forward Voltage	I_F = 30A	T_C = 25°C			1.7	V
		I_F = 10A	T_C = 100°C			1.05	
t_{rr}	Reverse Recovery Time	I_F = 1A di / dt = 100A/µs	V_R = 30V			50	ns
Q_{rr}	Recovered Charge	I_F = 2A di / dt = 20A/µs	V_R = 30V			50	nC
V_{FP}	Forward Recovery Overvoltage	di / dt = 10A/µs	I_F = 10A		2.5		V

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

THERMAL CHARACTERISTICS (TO220 METAL CASE)

$R_{\theta JC}$†	Thermal Resistance Junction – Case				1.6	°C/W

† Both diodes conducting.