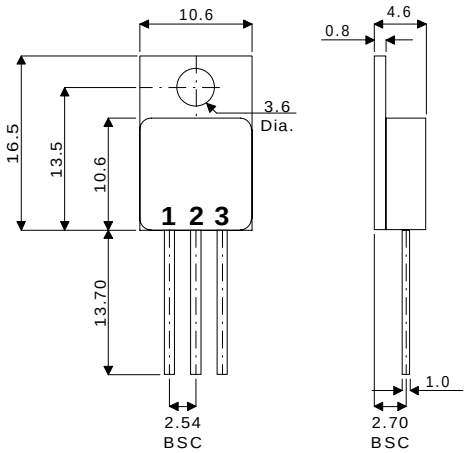
BYV143-40M BYV143-45M
BYV143-40AM BYV143-45AM
BYV143-40RM BYV143-45RM

MECHANICAL DATA
Dimensions in mm

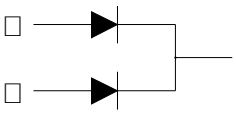
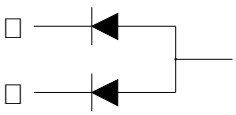
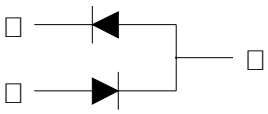


TO220 METAL PACKAGE

DUAL SCHOTTKY BARRIER DIODE IN TO220 METAL PACKAGE FOR HI–REL APPLICATIONS

FEATURES

- **HERMETIC TO220 METAL PACKAGE**
- **ISOLATED CASE**
- **SCREENING OPTIONS AVAILABLE**
- **OUTPUT CURRENT 30A**
- **LOW V_F (V_F < 0.6V)**
- **LOW LEAKAGE**

Common Cathode	**Common Anode**	**Series Connection**
BYV143-xxM	**BYV143-xxAM**	**BYV143-xxRM**
		
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)				BYV143–40M	BYV143–45M
V_{RRM}	Peak Repetitive Reverse Voltage			40V	45V
V_{RWM}	Crest Working Reverse Voltage			40V	45V
V_R	Continuous Reverse Voltage			40V	45V
I_O	Output Current (δ = 0.5)			30A	
$I_{F(RMS)}$	Forward RMS Current			40A	
I_{FRM}	Repetitive Peak Forward Current			250A	
I_{FSM}	Non Repetitive Peak Forward Current (per diode)		t = 10 ms	200A	
I_{FSM}	Non Repetitive Peak Forward Current (per diode)		t = 8.3 ms	220A	
I^2T	I^2T for fusing (per diode)		t = 10 ms	$200A^2s$	
I_{RRM}	Reverse Surge Current	t_p = 2 µs	δ = 0.001	2A	
I_{RSM}	Reverse Surge Current	t_p = 100 µs		2A	
T_{stg}	Storage Temperature Range			–65 to 150°C	
T_j	Maximum Operating Junction Temperature			150°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

Prelim. 02/98

SEME LAB

BYV143-40M BYV143-45M
BYV143-40AM BYV143-45AM
BYV143-40RM BYV143-45RM

ELECTRICAL CHARACTERISTICS (Per Diode)

Parameter		Test Conditions		Min.	Typ.	Max.	Unit
V_F	Forward Voltage	I_F = 15A	T_j = 150°C			0.6	V
		I_F = 20A	T_j = 25°C			0.8	V
I_R	Reverse Current	$V_R = V_{RWM}$(Max)	T_j = 125°C			30	mA
		$V_R = V_{RWM}$(Max)	T_j = 25°C			500	µA
C_d	Junction Capacitance	V_R = 5 V	f = 1 MHz		500		pF

THERMAL CHARACTERISTICS

Parameter			Min.	Typ.	Max.	Unit
$R_{\theta JC}$	Thermal Resistance Junction to Case	(Both Diodes)			1.4	°C / W
		(Per Diode)			2.3	
$R_{\theta JA}$	Thermal Resistance Junction to Ambient				60	

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