

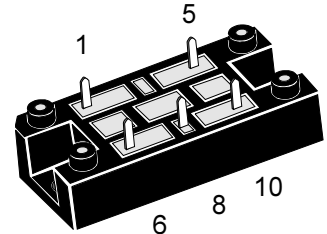
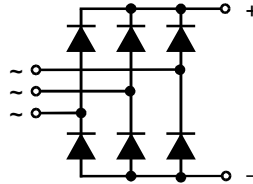
# Three Phase Rectifier Bridge

with Fast Recovery Epitaxial Diodes (FRED)

$I_{dAV} = 30 \text{ A}$   
 $V_{RRM} = 2000 \text{ V}$   
 $t_{rr} = 70 \text{ ns}$

Preliminary data

$V_{RSM}$ V	$V_{RRM}$ V	Type
2000	2000	VUE 30-20NO1



Symbol	Conditions	Maximum Ratings	
$I_{dAV}$	$T_C = 65^\circ\text{C}$ , module	30	A
$I_{FSM}$	$T_{VJ} = 45^\circ\text{C}$ ; $V_R = 0$ $t = 10 \text{ ms}$ (50 Hz), sine	75	A
	$T_{VJ} = T_{VJM}$ ; $V_R = 0$ $t = 10 \text{ ms}$ (50 Hz), sine	65	A
$I^2dt$	$T_{VJ} = 45^\circ\text{C}$ ; $V_R = 0$ $t = 10 \text{ ms}$ (50 Hz), sine	28	A <sup>2</sup> s
	$T_{VJ} = T_{VJM}$ ; $V_R = 0$ $t = 10 \text{ ms}$ (50 Hz), sine	21	A <sup>2</sup> s
$T_{VJ}$		-40...+150	°C
$T_{VJM}$		150	°C
$T_{stg}$		-40...+125	°C
$V_{ISOL}$	50/60 Hz, RMS $t = 1 \text{ min}$	3000	V~
	$I_{ISOL} \leq 1 \text{ mA}$ $t = 1 \text{ s}$	3600	V~
$M_d$	Mounting torque (M5) (10-32UNF)	2 - 2.5	Nm
		18 - 22	lb.in.
Weight	typ.	35	g

### Features

- Package with DCB ceramic base plate
- Isolation voltage 3600 V~
- Planar passivated chips
- Leads suitable for PC board soldering
- Creeping and creepage-distance fulfil UL 508/CSA 22.2NO14 and VDE 0160 requirements
- Epoxy meets UL94V-O
- UL registered E72873

### Applications

- Supplies for DC power equipment
- Input rectifiers for PWM inverter
- Output filter for PWM inverter

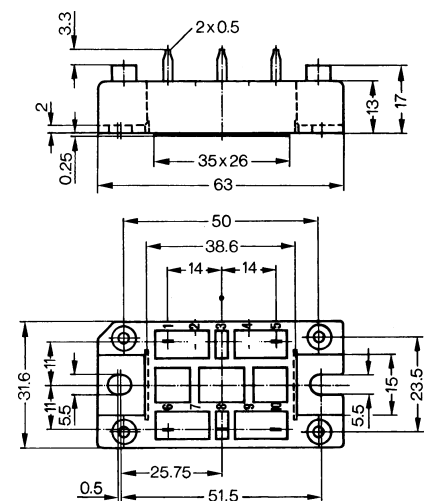
### Advantages

- Reduced EMI/RFI
- Easy to mount with two screws
- Space and weight savings
- Improved temperature and power cycling

Symbol	Conditions	Characteristic Values	
		typ.	max
$I_R$	$V_R = V_{RRM}$ $V_R = 0.8 V_{RRM}$	$T_{VJ} = 25^\circ\text{C}$	0.75 mA
		$T_{VJ} = 125^\circ\text{C}$	7 mA
$V_F$	$I_F = 12 \text{ A}$	$T_{VJ} = 25^\circ\text{C}$	5.41 V
$V_{T0}$	For power-loss calculations only		3.3 V
$r_T$			93 mΩ
$R_{thJC}$	per diode, DC		1.7 K/W
$R_{thCH}$		0.3	K/W
$I_{RM}$	$I_F = 12 \text{ A}$ , $-di/dt = 100 \text{ A/ms}$ $V_R = 540 \text{ V}$ , $L \leq 0.05 \text{ mH}$ , $T_{VJ} = 100^\circ\text{C}$	9	12 A
$t_{rr}$	$I_F = 1 \text{ A}$ ; $-di/dt = 100 \text{ A/ms}$ ; $V_R = 30 \text{ V}$ , $T_{VJ} = 25^\circ\text{C}$	70	90 ns
$d_S$	Creeping distance on surface		12.7 mm
$d_A$	Creepage distance in air		9.4 mm
$a$	Max. allowable acceleration		50 m/s <sup>2</sup>

Data according to IEC 60747 and refer to a single diode unless otherwise stated.

### Dimensions in mm (1 mm = 0.0394")



030