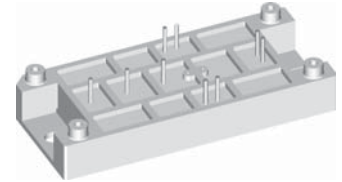
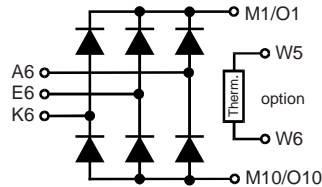


# Three Phase Rectifier Bridge

**$I_{dAVM} = 121/157 \text{ A}$**   
 **$V_{RRM} = 1200-1600 \text{ V}$**

$V_{RRM}$	Type	$V_{RRM}$	Type
V	V		
1200	VUO 120-12 NO1	1600	VUO 120-16 NO1
1200	VUO 155-12 NO1	1600	VUO 155-16 NO1



Symbol	Test Conditions	Maximum Ratings		
		VUO 120	VUO155	
$V_{RRM}$		1200/1600	1200/1600	V
$I_{dAVM}$	$T_C = 75^\circ\text{C}$ , sinusoidal 120°	121	157	A
$I_{FSM}$	$T_{VJ} = 45^\circ\text{C}$ , $t = 10 \text{ ms}$ , $V_R = 0 \text{ V}$	650	850	A
	$T_{VJ} = 150^\circ\text{C}$ , $t = 10 \text{ ms}$ , $V_R = 0 \text{ V}$	580	760	A
$I^2t$	$T_{VJ} = 45^\circ\text{C}$ , $t = 10 \text{ ms}$ , $V_R = 0 \text{ V}$	2110	3610	A
	$T_{VJ} = 150^\circ\text{C}$ , $t = 10 \text{ ms}$ , $V_R = 0 \text{ V}$	1680	2880	A
$P_{tot}$	$T_C = 25^\circ\text{C}$ per diode	150	190	W
$T_{VJ}$		-40...+150		°C
$T_{VJM}$		150		°C
$T_{stg}$		-40...+125		°C
$V_{ISOL}$	50/60 Hz $I_{ISOL} \leq 1 \text{ mA}$	$t = 1 \text{ min}$	3000	V~
		$t = 1 \text{ s}$	3600	V~
$M_d$	Mounting torque (M5) (10-32 unf)		2-2.5	Nm
			18-22	lb.in.
$d_s$	Creep distance on surface		12.7	mm
$d_A$	Strike distance in air		9.4	mm
$a$	Maximum allowable acceleration		50	$\text{m/s}^2$
Weight	typ.		80	g

## Features

- Soldering connections for PCB mounting
- Isolation voltage 3600 V~
- Convenient package outline
- UL registered E 72873
- Case and potting UL94 V-0

## Applications

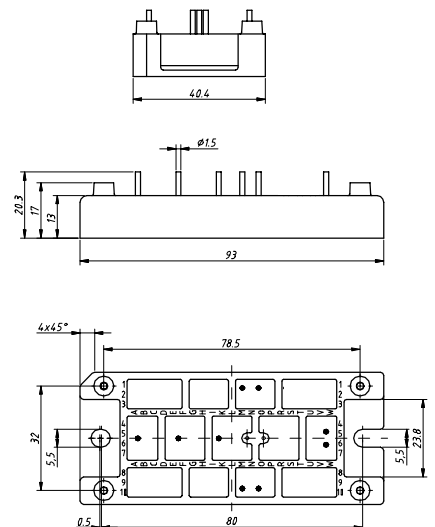
- Input Rectifier for Drive Inverters

## Advantages

- Easy to mount with two screws
- Suitable for wave soldering
- High temperature and power cycling capability

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

Symbol	Test Conditions	Characteristic Values ( $T_{VJ} = 25^\circ\text{C}$ , unless otherwise specified)		
		min.	typ.	max.
$I_R$	$V_R = V_{RRM}$ , $T_{VJ} = 25^\circ\text{C}$ $V_R = V_{RRM}$ , $T_{VJ} = 150^\circ\text{C}$			0.3 mA 5 mA
$V_F$	$I_F = 150 \text{ A}$ , $T_{VJ} = 25^\circ\text{C}$	VUO 120 VUO 155		1.59 V 1.49 V
$V_{F0}$	For power-loss calculations only	VUO 120 VUO 155		0.80 V 0.75 V
$r_T$	$T_{VJ} = 150^\circ\text{C}$	VUO 120 VUO 155		6.1 $\text{m}\Omega$ 4.6 $\text{m}\Omega$
$R_{thJC}$	per diode	VUO 120		1.0 K/W
		VUO 155		0.8 K/W
$R_{thJH}$		VUO 120		1.3 K/W
		VUO 155		1.1 K/W
$R_{25}$ (option)	Siemens S 891/2,2/+9			2.2 k $\Omega$



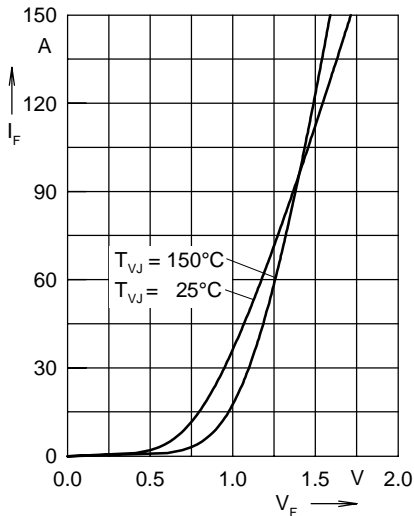


Fig. 1 Forward current versus voltage drop per diode

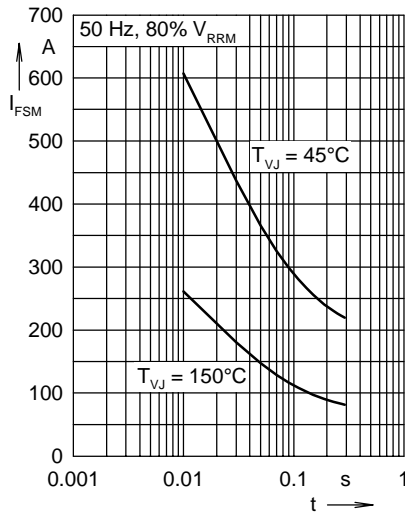


Fig. 2 Surge overload current

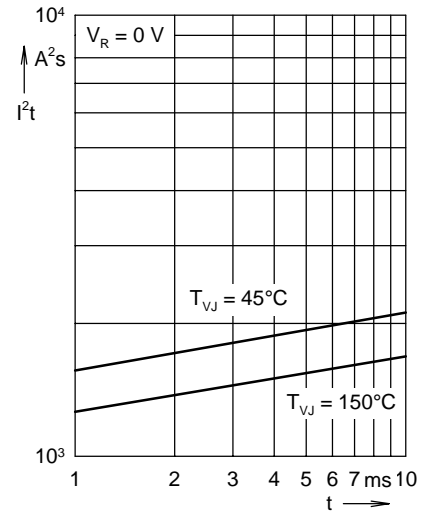


Fig. 3 I<sup>2</sup>t versus time per diode

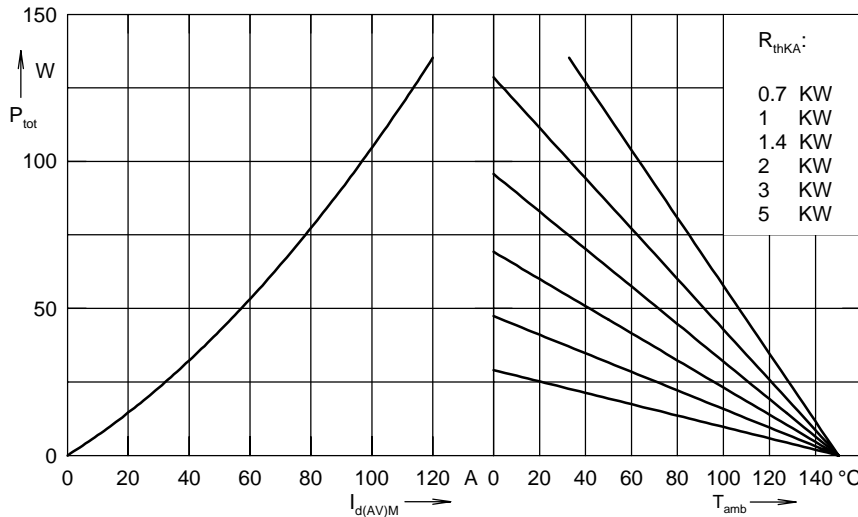


Fig. 4 Power dissipation versus direct output current and ambient temperature, sine 120°

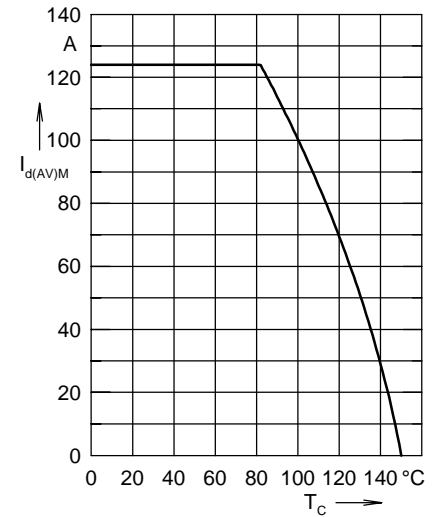


Fig. 5 Max. forward current versus case temperature

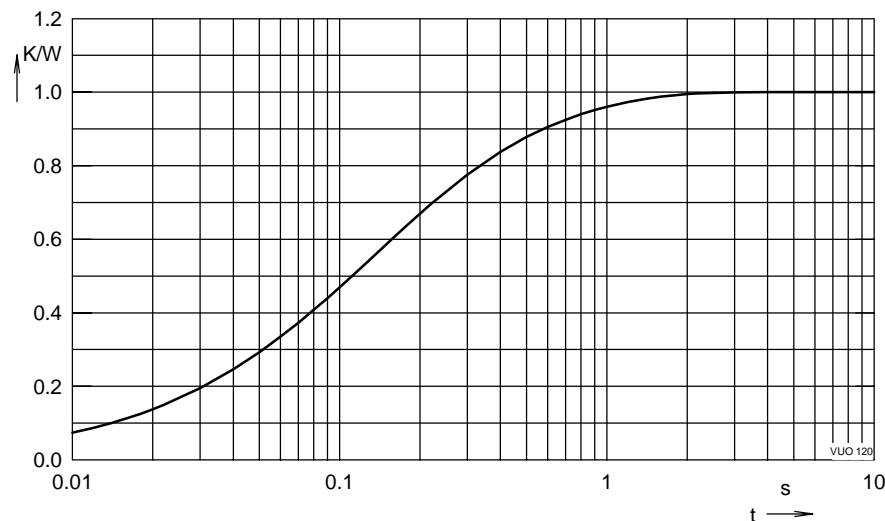


Fig. 6 Transient thermal impedance junction to case

Constants for  $Z_{thjC}$  calculation:

i	$R_{thi}$ (K/W)	$t_i$ (s)
1	0.003521	0.01
2	0.1479	0.05
3	0.5599	0.14
4	0.2887	0.5

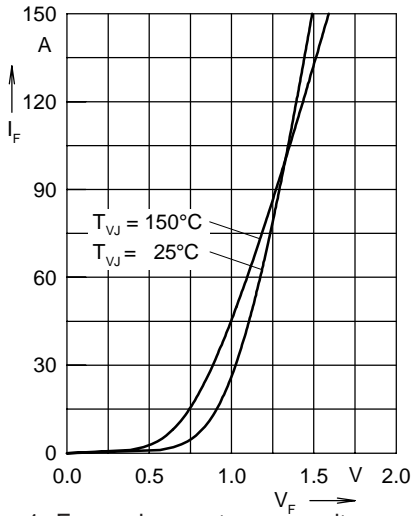


Fig. 1 Forward current versus voltage drop per diode

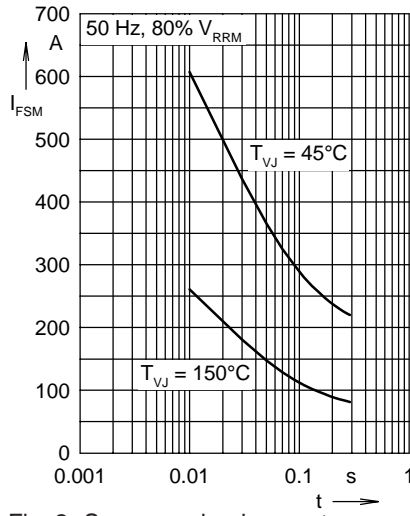


Fig. 2 Surge overload current

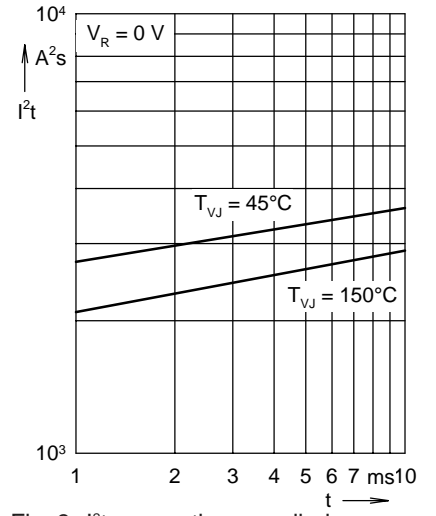


Fig. 3 I<sup>2</sup>t versus time per diode

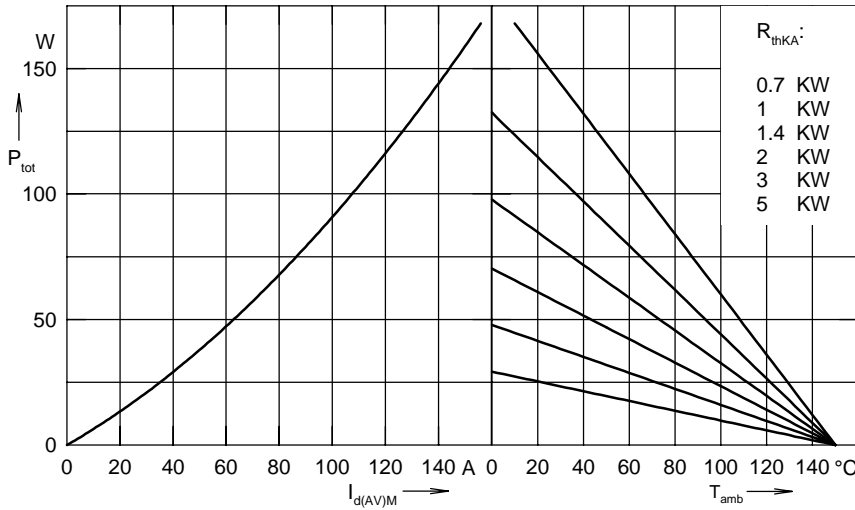


Fig. 4 Power dissipation versus direct output current and ambient temperature, sine 120°

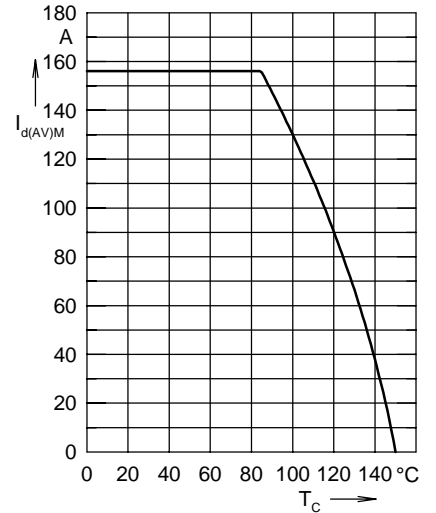


Fig. 5 Max. forward current versus case temperature

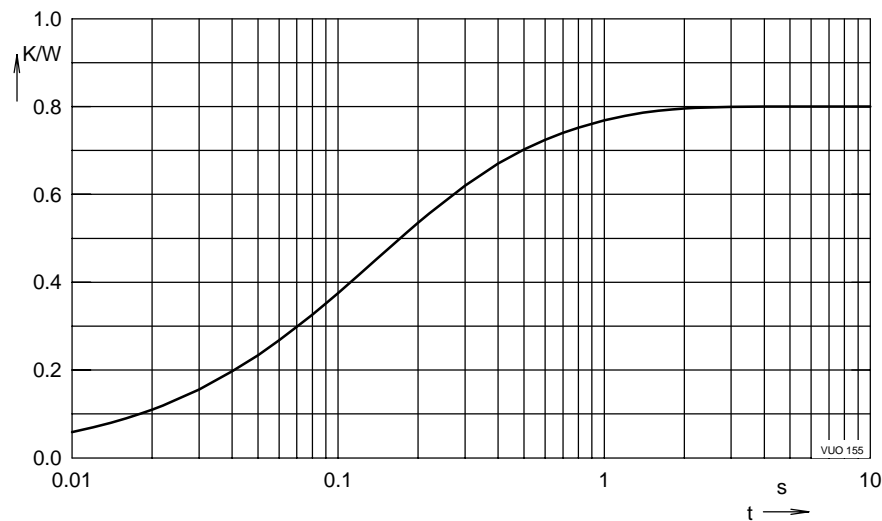


Fig. 6 Transient thermal impedance junction to case

Constants for  $Z_{thJC}$  calculation:

i	$R_{thi}$ (K/W)	$t_i$ (s)
1	0.002817	0.01
2	0.1183	0.05
3	0.4479	0.14
4	0.231	0.5