

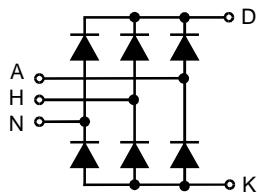
ECO-PAC™

Three Phase Rectifier Bridge

with Fast Recovery Epitaxial Diodes (FRED)

I_{dAV} = 86 A
 V_{RRM} = 600 V
 t_{rr} = 35 ns

V_{RSM}	V_{RRM}	Typ
V	V	
600	600	VUE 75-06NO7



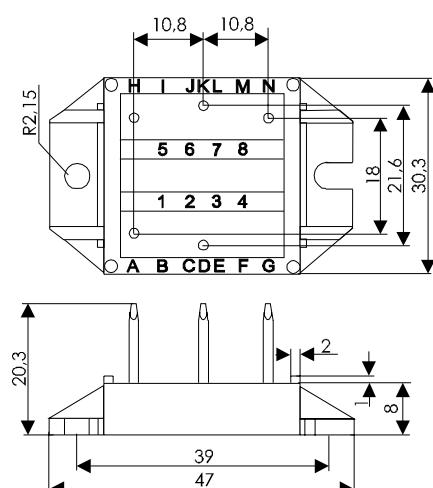
Symbol	Conditions	Maximum Ratings		
$I_{dAV}^{(1)}$	$T_c = 100^\circ\text{C}$, module	86	A	
I_{dAVM}		90	A	
I_{FSM}	$T_{VJ} = 45^\circ\text{C}$ $V_R = 0$	250	A	
	$t = 10 \text{ ms (50 Hz), sine}$ $t = 8.3 \text{ ms (60 Hz), sine}$	275	A	
	$T_{VJ} = T_{VJM}$ $V_R = 0$	215	A	
	$t = 10 \text{ ms (50 Hz), sine}$ $t = 8.3 \text{ ms (60 Hz), sine}$	235	A	
I^2t	$T_{VJ} = 45^\circ\text{C}$ $V_R = 0$	315	A^2s	
	$t = 10 \text{ ms (50 Hz), sine}$ $t = 8.3 \text{ ms (60 Hz), sine}$	320	A^2s	
	$T_{VJ} = T_{VJM}$ $V_R = 0$	230	A^2s	
	$t = 10 \text{ ms (50 Hz), sine}$ $t = 8.3 \text{ ms (60 Hz), sine}$	230	A^2s	
T_{VJ}		-40...+150	$^\circ\text{C}$	
T_{VJM}		150	$^\circ\text{C}$	
T_{stg}		-40...+125	$^\circ\text{C}$	
V_{ISOL}	50/60 Hz, RMS $I_{ISOL} \leq 1 \text{ mA}$	3000	$\text{V}_\text{~}$	
	$t = 1 \text{ min}$ $t = 1 \text{ s}$	3600	$\text{V}_\text{~}$	
M_d	Mounting torque (M4)	1.5-2/14-18	Nm/lb.in.	
Weight	typ.	19	g	

Symbol	Conditions	Characteristic Values	
		typ.	max.
I_R	$V_R = V_{RRM}$ $V_R = V_{RRM}$	0.25	mA
	$T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = T_{VJM}$	1.0	mA
V_F	$I_F = 30 \text{ A}$	1.57	V
V_{T_0}	for power-loss calculations only	0.98	V
r_T		8	$\text{m}\Omega$
R_{thJC}	per diode; DC current	0.9	K/W
R_{thCH}	per diode, DC current, typ.	0.3	K/W
I_{RM}	$I_F = 50 \text{ A}, -di/dt = 100 \text{ A}/\mu\text{s}$ $V_R = 100 \text{ V}, L = 0.05 \text{ mH}, T_{VJ} = 100^\circ\text{C}$	6	tbd A
t_{rr}	$I_F = 1 \text{ A}, -di/dt = 200 \text{ A}/\mu\text{s}; V_R = 30 \text{ V}, T_{VJ} = 25^\circ\text{C}$	35	tbd ns
a	Max. allowable acceleration	50	m/s^2
d_s	creeping distance on surface	11.2	mm
d_A	creepage distance in air	9.7	mm

Data according to IEC 60747 refer to a single diode unless otherwise stated
① for resistive load at bridge output.

IXYS reserves the right to change limits, test conditions and dimensions.

Dimensions in mm (1 mm = 0.0394")



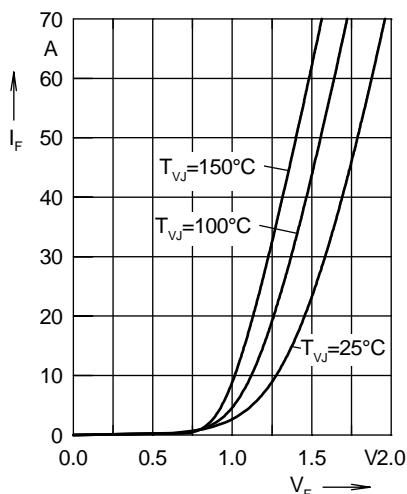
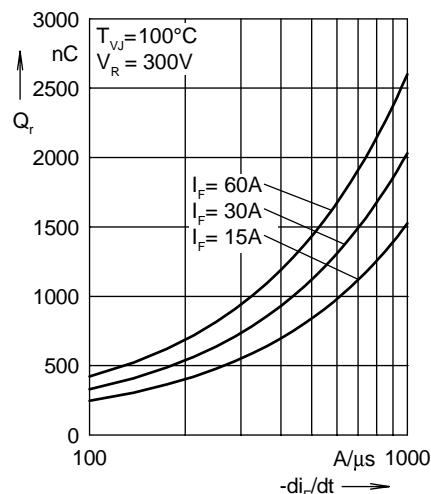
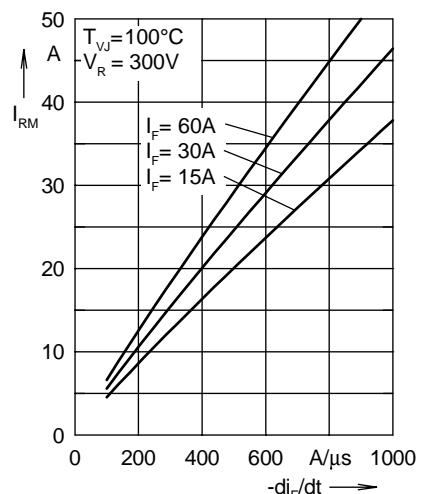
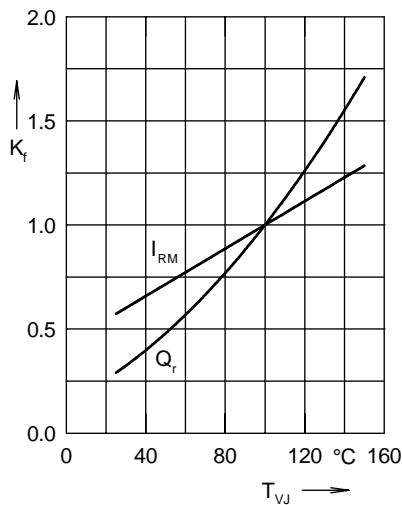
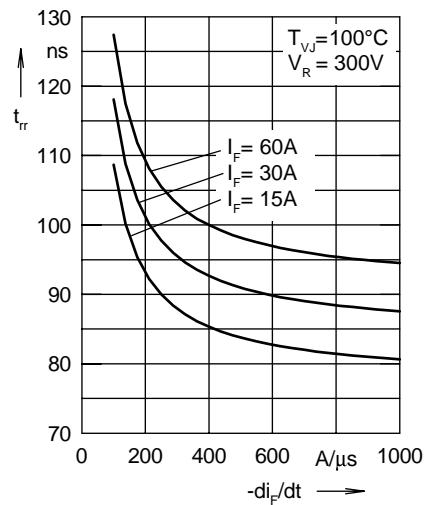
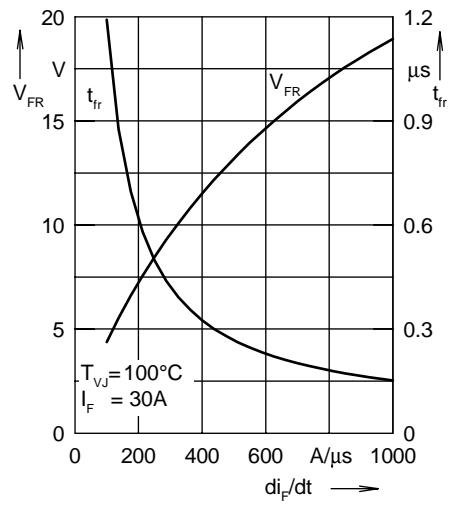
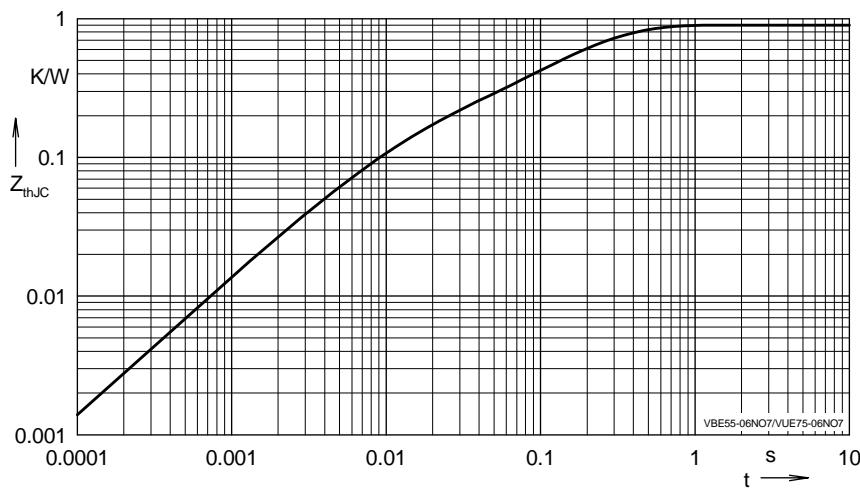
Fig. 1 Forward current I_F versus V_F Fig. 2 Reverse recovery charge Q_r versus $-di_F/dt$ Fig. 3 Peak reverse current I_{RM} versus $-di_F/dt$ Fig. 4 Dynamic parameters Q_r , I_{RM} versus T_{VJ} Fig. 5 Recovery time t_{rr} versus $-di_F/dt$ Fig. 6 Peak forward voltage V_{FR} and t_{rr} versus di_F/dt 

Fig. 7 Transient thermal resistance junction to case

NOTE: Fig. 2 to Fig. 6 shows typical values