



**THE DATASHEET OF
DF272-400-22_D47MM**





TET ESTEL AS
ESTONIA

May
2015

Series
DF272-400
DF272-400X

Fast Recovery Stud-Mounted
Diodes
Type DF272-400,
DF272-400X

For use as high-power inverters,
fly-wheel diodes in DC choppers,
power supplies as high frequency rectifier

Maximum mean forward current	I_{FAV}					400 A	
Maximum repetitive peak reverse voltage	U_{RRM}					1400 ÷ 2200 V	
Reverse recovery time	trr					3,2; 4,0; 5,0 μs	
U_{RRM}, V	1400	1500	1600	1800	2000	2200	
Voltage code	14	15	16	18	20	22	
$T_{vj}, °C$	- 60 ÷ 125						

MAXIMUM ALLOWABLE RATINGS

Symbols and parameters		Units	DF272-400 DF272-400X	Conditions
I_{FAV}	Mean forward current	A	400 324	$T_c=80 °C$, $T_c=92 °C$, 180° half-sine wave, 50 Hz
I_{FRMS}	RMS forward current	A	628	$T_c=80 °C$
I_{FSM}	Surge forward current	kA	8,0 8,8	$T_{vj}=125 °C$ $T_{vj}= 25 °C$ tp=10 ms
I^2t	Limiting load integral	kA^2s	320 387	$T_{vj}=125 °C$ $T_{vj}= 25 °C$ UR=0
U_{RRM}	Repetitive peak reverse voltage	V	1400÷2200	$T_j \min \leq T_{vj} \leq T_{jM}$ 180° half-sine wave, 50 Hz
U_{RSM}	Non-repetitive peak reverse voltage	V	1500÷2300	$T_j \min \leq T_{vj} \leq T_{jM}$ 180° half-sine wave tp=10 ms, Single pulse
T_{stg}	Storage temperature	°C	-60÷80	
T_{vj}	Junction temperature	°C	-60÷125	

CHARACTERISTICS

U_{FM}	Peak forward voltage	V	1,85	$T_{vj}=25 °C$, $I_{FM}=3,14 I_{FAV}$
$U_{F(TO)}$	Threshold voltage	V	1,05	$T_{vj}=125 °C$ 1,57 $I_{FAV} < I_F < 4,71 I_{FAV}$
R_T	Forward slope resistance	mΩ	0,5	
I_{RRM}	Repetitive peak reverse current	mA	50	$T_{vj}=125 °C$, $U_R = U_{RRM}$

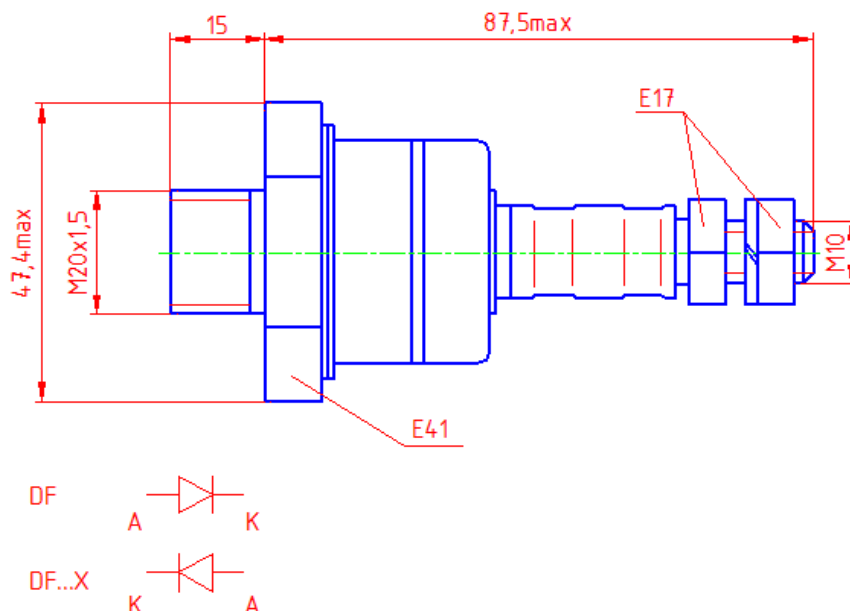
CHARACTERISTICS

Symbols and parameters		Units	DF272-400 DF272-400X	Conditions
trr	Reverse recovery time	μs	3,2 ÷ 5,0 2,5 ÷ 4,0 2,0 ÷ 3,2	T _{vj} =125°C, I _F =400A, U _R =100V di _R / dt = 50A/μs di _R / dt = 100A/μs di _R / dt = 200A/μs
Q _{rr}	Recovered charge	μC	140 ÷ 230 190 ÷ 300 250 ÷ 380	T _{vj} =125°C, I _F =400A, U _R =100V di _R / dt = 50A/μs di _R / dt = 100A/μs di _R / dt = 200A/μs
R _{thjc}	Thermal resistance junction to case	°C/W	0,07	Direct current

ORDERING

	DF	272	400	X	18	2
	1	2	3	4	5	6

1. Fast recovery diode.
2. Design version.
3. Mean forward current, A .
4. Reverse polarity (cathode stud mounted), without X-normal polarity.
5. Voltage code (18 = 1800 V).
6. Group of reverse recovery time (1 ≤ 5,0μs; 2 ≤ 4,0 μs; 3 ≤ 3,2 μs).



Mounting of diodes with a rigid cathode gate should be carried through a flexible conductor.

Tightening torque: 32 ÷ 48 Nm (thread M20x1,5)

Tightening torque: 8 ÷ 12 Nm (thread M10)

Weight : 370 grams

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