	TET ESTEL AS ESTONIA	**September 2015**

Series
DF171-400
DF171-400X

Fast Recovery Stud-Mounted Diodes Type DF171-400, DF171-400X

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

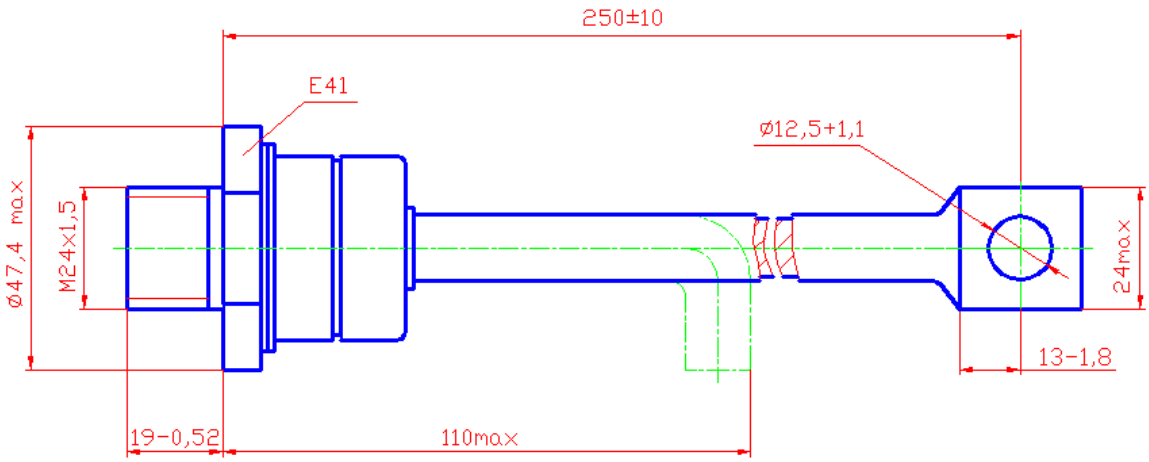
Maximum mean forward current					I_{FAV}		**400 A**		
Maximum repetitive peak reverse voltage					U_{RRM}		**800 ÷1600 V**		
Reverse recovery time					**trr**		**2,0; 2,5; 3,2 µs**		
U_{RRM}, V	800	900	1000	1100	1200	1300	1400	1500	1600
Voltage code	8	9	10	11	12	13	14	15	16
Tvj, °C	- 60 ÷ 125								

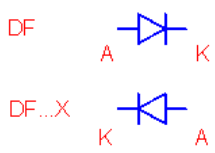
MAXIMUM ALLOWABLE RATINGS					
Symbols and parameters		Units	DF171-400 DF171-400X	Conditions	
I_{FAV}	Mean forward current	A	400 620	Tc=85 °C, Tc=55 °C, 180° half-sine wave, 50 Hz	
I_{FRMS}	RMS forward current	A	628	Tc=85°C	
I_{FSM}	Surge forward current	kA	9,0 10,0	Tvj=125°C Tvj= 25°C	tp=10 ms U_R=0
I^2t	Limiting load integral	kA^2s	405 500	Tvj=125°C Tvj= 25°C	
U_{RRM}	Repetitive peak reverse voltage	V	800÷1600	Tj мin≤Tvj≤Tjм 180° half-sine wave, 50 Hz	
U_{RSM}	Non-repetitive peak reverse voltage	V	900÷1700	Tj мin≤Tvj≤Tjм 180° half-sine wave tp=10 ms, Single pulse	
Tstg	Storage temperature	°C	-60÷80		
Tvj	Junction temperature	°C	-60÷125		
CHARACTERISTICS					
U_{FM}	Peak forward voltage	V	1,8	Tvj=25°C, I_{FM}=3,14 I_{FAV}	
$U_{F(TO)}$	Threshold voltage	V	1,0	Tvj=125°C 1,57 I_{FAV}< I_F <4,71 I_{FAV}	
R_T	Forward slope resistance	mΩ	0,4		
I_{RRM}	Repetitive peak reverse current	mA	40	Tvj=125°C, U_R= U_{RRM}	

CHARACTERISTICS				
Symbols and parameters		Units	DF171-400 DF171-400X	Conditions
trr	Reverse recovery time	µs	2,0 ÷ 3,2 2,0 ÷ 2,5 1,6 ÷ 2,0	Tvj=125°C, IF=400A,UR=100V diR / dt = 50A/µs diR / dt =100A/µs diR / dt =200A/µs
Qrr	Recovered charge	µC	70 ÷ 100 100 ÷ 130 130 ÷ 190	Tvj=125°C, IF=400A,UR=100V diR / dt = 50A/µs diR / dt =100A/µs diR / dt =200A/µs
Rthjc	Thermal resistance junction to case	°C/W	0,07	Direct current

ORDERING						
	DF	**171**	**400**	**X**	**14**	**4**
	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 (14 = 1400 V)
6. Group of reverse recovery time (3 ≤ 3,2 µs; 4 ≤ 2,5 µs; 5 ≤ 2,0 µs)





Tightening torque: 40 ÷ 60 Nm
Weight : 480 grams