



TET ESTEL AS
ESTONIA

July
2013

Series
DF473-1600

Fast Recovery Press-Pack
Diode
Type DF473-1600

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

Maximum mean forward current					I_{FAV}	1600 A	
Maximum repetitive peak reverse voltage					U_{RRM}	3200 ÷ 4400 V	
Reverse recovery time					trr	6,3; 8,0; 10 μs	
U_{RRM} , V	3200	3400	3600	3800	4000	4200	4400
Voltage code	32	34	36	38	40	42	44
T_{vj} , °C	- 60 ÷ 125						

MAXIMUM ALLOWABLE RATINGS

Symbols and parameters		Units	DF473-1600	Conditions
I_{FAV}	Mean forward current	A	1600 2470	$T_c=86^\circ\text{C}$, $T_c=55^\circ\text{C}$, 180° half-sine wave, 50 Hz
I_{FRMS}	RMS forward current	A	2512	$T_c=86^\circ\text{C}$
I_{FSM}	Surge forward current	kA	36 39	$T_{vj}=125^\circ\text{C}$ $T_{vj}=25^\circ\text{C}$ tp=10 ms
I^2t	Limiting load integral	kA^2s	6480 7605	$T_{vj}=125^\circ\text{C}$ $T_{vj}=25^\circ\text{C}$ UR=0
U_{RRM}	Repetitive peak reverse voltage	V	3200÷4400	$T_j \min \leq T_{vj} \leq T_{jM}$ 180° half-sine wave, 50 Hz
U_{RSM}	Non-repetitive peak reverse voltage	V	3300÷4500	$T_j \min \leq T_{vj} \leq T_{jM}$ 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	2,3	$T_{vj}=25^\circ\text{C}$, $I_{FM}=3,14 I_{FAV}$
$U_{F(TO)}$	Threshold voltage	V	1,6	$T_{vj}=125^\circ\text{C}$ $1,57 I_{FAV} < I_F < 4,71 I_{FAV}$
R_T	Forward slope resistance	mΩ	0,2	
I_{RRM}	Repetitive peak reverse current	mA	150	$T_{vj}=125^\circ\text{C}$, $U_R = U_{RRM}$

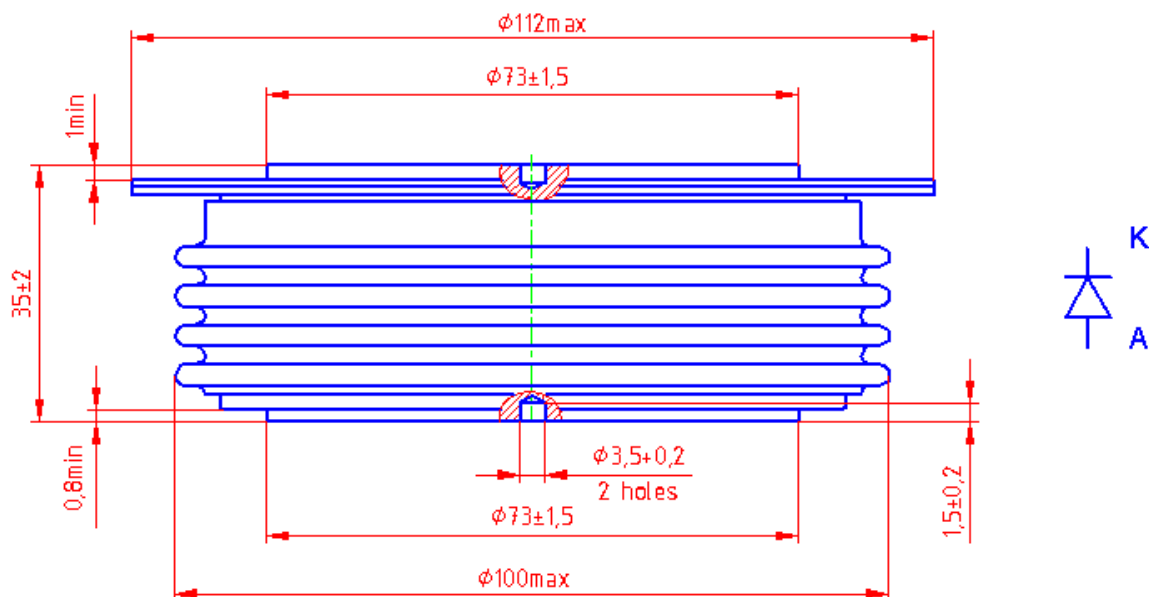
CHARACTERISTICS

Symbols and parameters		Units	DF473-1600	Conditions
trr	Reverse recovery time	μs	6,3 ÷ 10 5,0 ÷ 8,0 4,0 ÷ 6,3	Tvj=125°C, If=1600A, Ur=100V diR / dt = 50A/μs diR / dt = 100A/μs diR / dt = 200A/μs
Qrr	Recovered charge	μC	900 ÷ 1500 1200 ÷ 2000 1600 ÷ 2600	Tvj=125°C, If=1600A, Ur=100V diR / dt = 50A/μs diR / dt = 100A/μs diR / dt = 200A/μs
Rthjc	Thermal resistance junction to case	°C/W	0,01	Direct current, double side cooled

ORDERING

	DF	473	1600	40	B4	
	1	2	3	4	5	

1. Fast recovery diode
2. Design version
3. Mean forward current, A
4. Voltage code (40 = 4000 V)
5. Group of reverse recovery time (A4 ≤ 10,0 μs; B4 ≤ 8,0 μs; C4 ≤ 6,3 μs)



Mounting force : 36 ÷ 46 kN

Weight : 1700 grams