



**TET ESTEL AS**  
ESTONIA

**July**  
**2013**

**Series**  
**DF473-2000**

**Fast Recovery Press-Pack**  
**Diode**  
**Type DF473-2000**

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

Maximum mean forward current					$I_{FAV}$	<b>2000 A</b>	
Maximum repetitive peak reverse voltage					$U_{RRM}$	<b>3200 ÷ 4400 V</b>	
Reverse recovery time					<b>trr</b>	<b>8,0; 10; 12,5 μs</b>	
$U_{RRM}, V$	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	DF473-2000	Conditions
$I_{FAV}$	Mean forward current	A	2000 2600	$T_c=76 °C,$ $T_c=55 °C,$ 180° half-sine wave, 50 Hz
$I_{FRMS}$	RMS forward current	A	3140	$T_c=76 °C$
$I_{FSM}$	Surge forward current	kA	40 44	$T_{vj}=125 °C$ $T_{vj}= 25 °C$ tp=10 ms
$I^2t$	Limiting load integral	$kA^2s$	8000 9680	$T_{vj}=125 °C$ $T_{vj}= 25 °C$ 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	2,4	$T_{vj}=25 °C, I_{FM}=3,14 I_{FAV}$
$U_{F(TO)}$	Threshold voltage	V	1,6	$T_{vj}=125 °C$ $1,57 I_{FAV} < I_F < 4,71 I_{FAV}$
$R_T$	Forward slope resistance	mΩ	0,17	
$I_{RRM}$	Repetitive peak reverse current	mA	150	$T_{vj}=125 °C,$ $U_R = U_{RRM}$

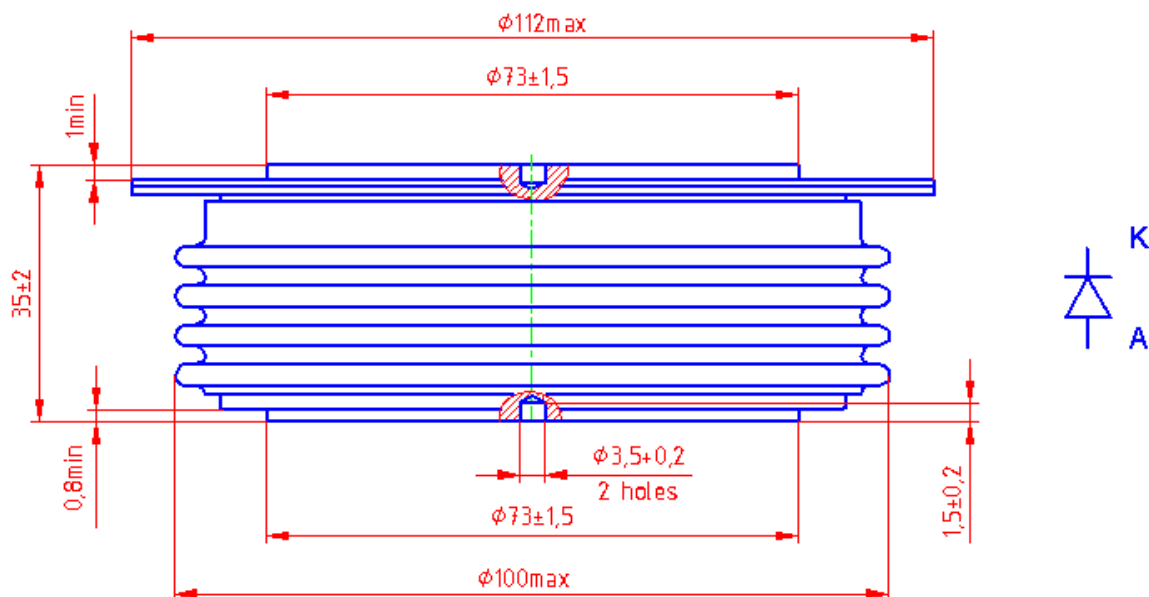
## CHARACTERISTICS

Symbols and parameters		Units	DF473-2000	Conditions
trr	Reverse recovery time	$\mu\text{s}$	8 ÷ 12,5 6,3 ÷ 10 5,0 ÷ 8,0	$T_{vj}=125^{\circ}\text{C}$ , $I_F=2000\text{A}$ , $U_R=100\text{V}$ $dI_R / dt = 50\text{A}/\mu\text{s}$ $dI_R / dt = 100\text{A}/\mu\text{s}$ $dI_R / dt = 200\text{A}/\mu\text{s}$
Qrr	Recovered charge	$\mu\text{C}$	1200 ÷ 1800 1500 ÷ 2400 2000 ÷ 3200	$T_{vj}=125^{\circ}\text{C}$ , $I_F=2000\text{A}$ , $U_R=100\text{V}$ $dI_R / dt = 50\text{A}/\mu\text{s}$ $dI_R / dt = 100\text{A}/\mu\text{s}$ $dI_R / dt = 200\text{A}/\mu\text{s}$
Rthjc	Thermal resistance junction to case	$^{\circ}\text{C}/\text{W}$	0,01	Direct current, double side cooled

## ORDERING

	DF	473	2000	40	A4	
	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 (X3 ≤ 12,5  $\mu\text{s}$ ; A4 ≤ 10,0  $\mu\text{s}$ ; B4 ≤ 8,0  $\mu\text{s}$ )



Mounting force : 36 ÷ 46 kN

Weight : 1700 grams