



TET ESTEL AS
ESTONIA

August
2014

Series
DF433-250

Fast Recovery Press-Pack
Diode
Type DF433-250

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

Maximum mean forward current					I_{FAV}	250 A		
Maximum repetitive peak reverse voltage					U_{RRM}	3200 ÷ 4600 V		
Reverse recovery time					trr	4,0; 5,0; 6,3 μs		
U_{RRM} , V	3200	3400	3600	3800	4000	4200	4400	4600
Voltage code	32	34	36	38	40	42	44	46
T_{vj} , °C	- 60 ÷ 125							

MAXIMUM ALLOWABLE RATINGS

Symbols and parameters		Units	DF433-250	Conditions
I_{FAV}	Mean forward current	A	250 520	$T_c=100^\circ\text{C}$, $T_c=55^\circ\text{C}$, 180° half-sine wave, 50 Hz
I_{FRMS}	RMS forward current	A	392	$T_c=100^\circ\text{C}$
I_{FSM}	Surge forward current	kA	6,0 7,0	$T_{vj}=125^\circ\text{C}$ $T_{vj}=25^\circ\text{C}$ tp=10 ms
I^2t	Limiting load integral	kA^2s	180 245	$T_{vj}=125^\circ\text{C}$ $T_{vj}=25^\circ\text{C}$ $U_R=0$
U_{RRM}	Repetitive peak reverse voltage	V	3200÷4600	$T_j \min \leq T_{vj} \leq T_{jM}$ 180° half-sine wave, 50 Hz
U_{RSM}	Non-repetitive peak reverse voltage	V	3300÷4700	$T_j \min \leq T_{vj} \leq T_{jM}$ 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	2,5	$T_{vj}=25^\circ\text{C}$, $I_{FM}=3,14 I_{FAV}$
$U_{F(TO)}$	Threshold voltage	V	1,45	$T_{vj}=125^\circ\text{C}$ $1,57 I_{FAV} < I_F < 4,71 I_{FAV}$
R_T	Forward slope resistance	mΩ	1,51	
I_{RRM}	Repetitive peak reverse current	mA	50	$T_{vj}=125^\circ\text{C}$, $U_R = U_{RRM}$

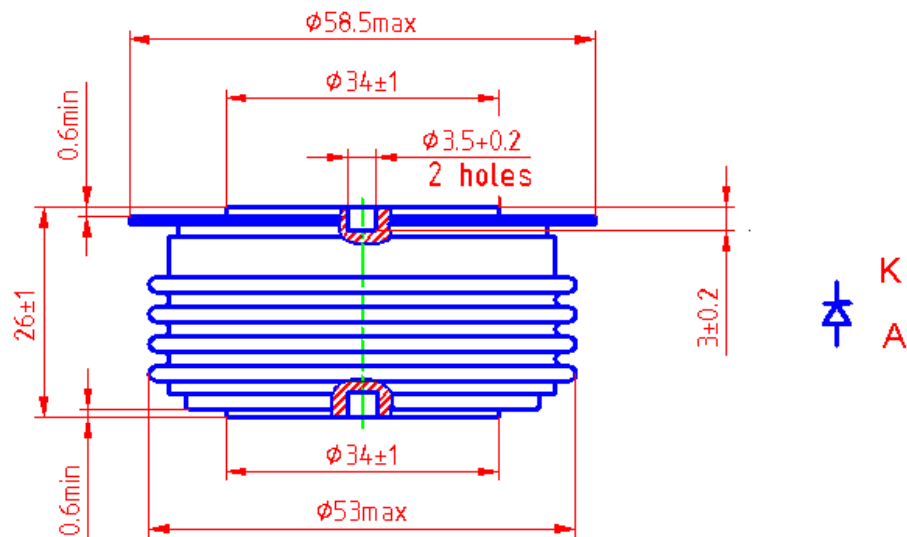
CHARACTERISTICS

Symbols and parameters		Units	DF433-250	Conditions
trr	Reverse recovery time	μs	4,0 ÷ 6,3 3,2 ÷ 5,0 2,5 ÷ 4,0	Tvj=125°C, IF=250A, UR=100V diR / dt = 50A/μs diR / dt = 100A/μs diR / dt = 200A/μs
Qrr	Recovered charge	μC	230 ÷ 330 270 ÷ 430 300 ÷ 500	Tvj=125°C, IF=250A, UR=100V diR / dt = 50A/μs diR / dt = 100A/μs diR / dt = 200A/μs
Rthjc	Thermal resistance junction to case	°C/W	0,04	Direct current, double side cooled

ORDERING

	DF	433	250	34	1	
	1	2	3	4	5	

1. Fast recovery diode
2. Design version
3. Mean forward current, A
4. Voltage code (34 = 3400 V)
5. Group of reverse recovery time ($C4 \leq 6,3 \mu s$; $1 \leq 5,0 \mu s$; $2 \leq 4,0 \mu s$)



Mounting force : 10 ÷ 15 kN
Weight : 250 grams