



**THE DATASHEET OF
DF443-500-44_26MM**





TET ESTEL AS
ESTONIA

October
2014

Series
DF443-500

Fast Recovery Press-Pack
Diode
Type DF443-500

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

Maximum mean forward current						I_{FAV}	500 A
Maximum repetitive peak reverse voltage						U_{RRM}	3200 ÷ 4400 V
Reverse recovery time						trr	5,0; 6,3 μs
U_{RRM}, V	3200	3400	3600	3800	4000	4200	4400
Voltage code	32	34	36	38	40	42	44
$T_{vj}, ^\circ C$	- 60 ÷ 125						

MAXIMUM ALLOWABLE RATINGS

Symbols and parameters		Units	DF443-500	Conditions
I_{FAV}	Mean forward current	A	500 755	$T_c=85^\circ C$, $T_c=55^\circ C$, 180° half-sine wave, 50 Hz
I_{FRMS}	RMS forward current	A	785	$T_c=85^\circ C$
I_{FSM}	Surge forward current	kA	8,0 9,0	$T_{vj}=125^\circ C$ $T_{vj}=25^\circ C$ tp=10 ms $U_R=0$
I^2t	Limiting load integral	kA^2s	320 405	$T_{vj}=125^\circ C$ $T_{vj}=25^\circ C$
U_{RRM}	Repetitive peak reverse voltage	V	3200÷4400	$T_{j\ min} \leq T_{vj} \leq T_{j\ M}$ 180° half-sine wave, 50 Hz
U_{RSM}	Non-repetitive peak reverse voltage	V	3300÷4500	$T_{j\ min} \leq T_{vj} \leq T_{j\ M}$ 180° half-sine wave tp=10 ms, Single pulse
T_{stg}	Storage temperature	$^\circ C$	-60÷80	
T_{vj}	Junction temperature	$^\circ C$	-60÷125	

CHARACTERISTICS

U_{FM}	Peak forward voltage	V	2,8	$T_{vj}=25^\circ C$, $I_{FM}=3,14 I_{FAV}$
$U_{F(TO)}$	Threshold voltage	V	1,4	$T_{vj}=125^\circ C$ $1,57 I_{FAV} < I_F < 4,71 I_{FAV}$
R_T	Forward slope resistance	mΩ	0,9	
I_{RRM}	Repetitive peak reverse current	mA	50	$T_{vj}=125^\circ C$, $U_R = U_{RRM}$

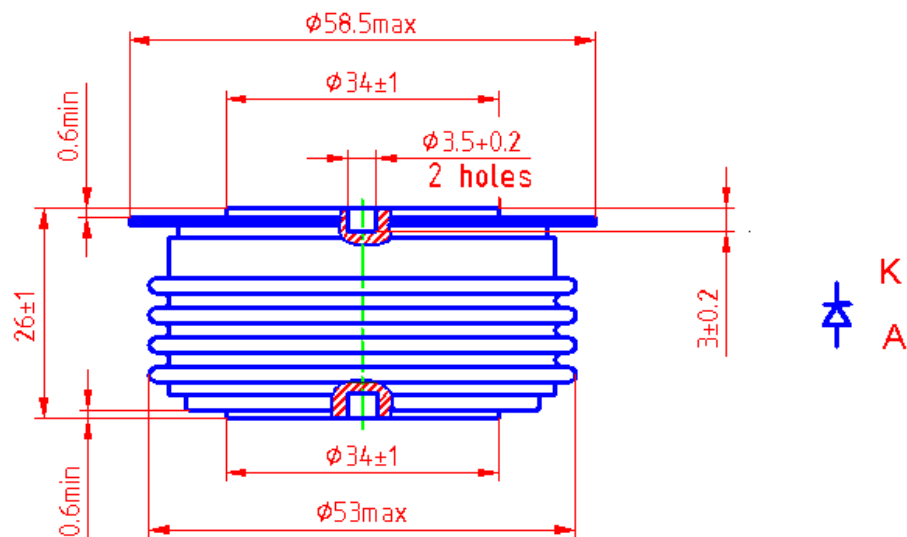
CHARACTERISTICS

Symbols and parameters		Units	DF443-500	Conditions
trr	Reverse recovery time	μs	5,0 ÷ 6,3 4,0 ÷ 5,0	$T_{vj}=125^{\circ}\text{C}$, $I_F=500\text{A}$, $U_R=100\text{V}$ $di_R / dt = 50\text{A}/\mu\text{s}$ $di_R / dt = 100\text{A}/\mu\text{s}$
Qrr	Recovered charge	μC	350 ÷ 450 430 ÷ 530	$T_{vj}=125^{\circ}\text{C}$, $I_F=500\text{A}$, $U_R=100\text{V}$ $di_R / dt = 50\text{A}/\mu\text{s}$ $di_R / dt = 100\text{A}/\mu\text{s}$
Rthjc	Thermal resistance junction to case	$^{\circ}\text{C}/\text{W}$	0,03	Direct current, double side cooled

ORDERING

	DF	443	500	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 ($C4 \leq 6,3 \mu\text{s}$; $1 \leq 5,0 \mu\text{s}$)



Mounting force : 13 ÷ 19 kN
Weight : 320 grams

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