



TET ESTEL AS
ESTONIA

September
2015

Series
DF153-1250

Fast Recovery Press-Pack
Diode
Type DF153-1250

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

Maximum mean forward current					I_{FAV}	1250 A		
Maximum repetitive peak reverse voltage					U_{RRM}	800 ÷ 1500 V		
Reverse recovery time					trr	3,2; 4,0; 5,0 μs		
U_{RRM}, V	800	900	1000	1100	1200	1300	1400	1500
Voltage code	8	9	10	11	12	13	14	15
$T_{vj}, °C$	- 60 ÷ 125							

MAXIMUM ALLOWABLE RATINGS

Symbols and parameters		Units	DF153-1250	Conditions
I_{FAV}	Mean forward current	A	1250 2105	$T_c=90°C$, $T_c=55°C$, 180° half-sine wave, 50 Hz
I_{FRMS}	RMS forward current	A	1960	$T_c=90°C$
I_{FSM}	Surge forward current	kA	27 30	$T_{vj}=125°C$ $T_{vj}= 25°C$ tp=10 ms
I^2t	Limiting load integral	kA ² s	3645 4500	$T_{vj}=125°C$ $T_{vj}= 25°C$ UR=0
U_{RRM}	Repetitive peak reverse voltage	V	800÷1500	$T_j \min \leq T_{vj} \leq T_{jM}$ 180° half-sine wave, 50 Hz
U_{RSM}	Non-repetitive peak reverse voltage	V	880÷1600	$T_j \min \leq T_{vj} \leq T_{jM}$ 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	1,6	$T_{vj}=25°C$, $I_{FM}=3,14 I_{FAV}$
$U_{F(TO)}$	Threshold voltage	V	1,1	$T_{vj}=125°C$ $1,57 I_{FAV} < I_F < 4,71 I_{FAV}$
R_T	Forward slope resistance	mΩ	0,11	
I_{RRM}	Repetitive peak reverse current	mA	75	$T_{vj}=125°C$, $U_R = U_{RRM}$

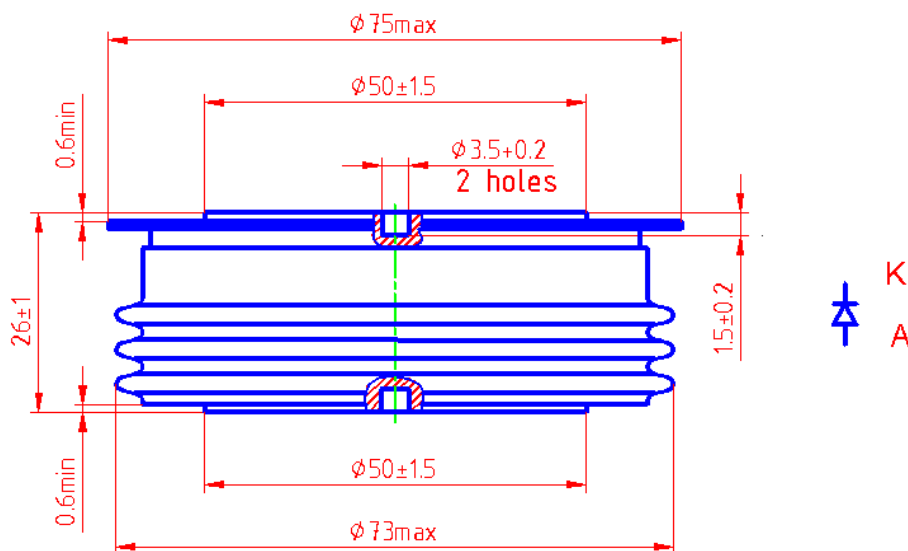
CHARACTERISTICS

Symbols and parameters		Units	DF153-1250	Conditions
trr	Reverse recovery time	μs	3,2÷5,0 2,5÷4,0 2,0÷3,2	$T_{vj}=125^{\circ}\text{C}$, $I_F=1250\text{A}$, $U_R=100\text{V}$ $di_R / dt = 50\text{A}/\mu\text{s}$ $di_R / dt = 100\text{A}/\mu\text{s}$ $di_R / dt = 200\text{A}/\mu\text{s}$
Qrr	Recovered charge	μC	140÷240 220÷340 300÷480	$T_{vj}=125^{\circ}\text{C}$, $I_F=1250\text{A}$, $U_R=100\text{V}$ $di_R / dt = 50\text{A}/\mu\text{s}$ $di_R / dt = 100\text{A}/\mu\text{s}$ $di_R / dt = 200\text{A}/\mu\text{s}$
Rthjc	Thermal resistance junction to case	$^{\circ}\text{C}/\text{W}$	0,02	Direct current, double side cooled

ORDERING

	DF	153	1250	12	3	
	1	2	3	4	5	

1. Fast recovery diode.
2. Design version.
3. Mean forward current, A.
4. Voltage code (12 = 1200 V).
5. Group of reverse recovery time ($1 \leq 5 \mu\text{s}$; $2 \leq 4 \mu\text{s}$; $3 \leq 3,2 \mu\text{s}$).



Mounting force : 19 ÷ 28 kN
Weight : 580 grams