



TET ESTEL AS
ESTONIA

September
2015

Series
DF253-1250

Fast Recovery Press-Pack
Diode
Type DF253-1250

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}	1400 ÷ 2600 V	
Reverse recovery time					trr	4,0; 5,0; 6,3 μs	
U_{RRM}, V	1400	1600	1800	2000	2200	2400	2600
Voltage code	14	16	18	20	22	24	26
$T_{vj}, °C$	- 60 ÷ 125						

MAXIMUM ALLOWABLE RATINGS

Symbols and parameters		Units	DF253-1250	Conditions	
I_{FAV}	Mean forward current	A	1250 1730	$T_c=80°C$, $T_c=55°C$, 180° half-sine wave, 50 Hz	
I_{FRMS}	RMS forward current	A	1960	$T_c=80°C$	
I_{FSM}	Surge forward current	kA	22 24	$T_{vj}=125°C$ $T_{vj}=25°C$	tp=10 ms $U_R=0$
I^2t	Limiting load integral	kA^2s	2420 2880	$T_{vj}=125°C$ $T_{vj}=25°C$	
U_{RRM}	Repetitive peak reverse voltage	V	1400÷2600	$T_j \min \leq T_{vj} \leq T_{jM}$ 180° half-sine wave, 50 Hz	
U_{RSM}	Non-repetitive peak reverse voltage	V	1500÷2700	$T_j \min \leq T_{vj} \leq T_{jM}$ 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	2,2	$T_{vj}=25°C$, $I_{FM}=3,14 I_{FAV}$
$U_{F(TO)}$	Threshold voltage	V	1,2	$T_{vj}=125°C$ $1,57 I_{FAV} < I_F < 4,71 I_{FAV}$
R_T	Forward slope resistance	mΩ	0,19	
I_{RRM}	Repetitive peak reverse current	mA	75	$T_{vj}=125°C$, $U_R = U_{RRM}$

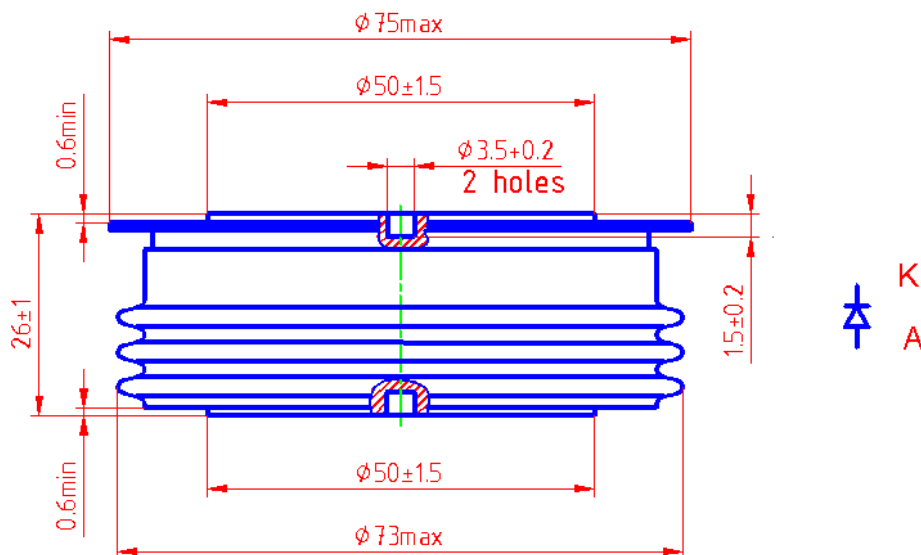
CHARACTERISTICS

Symbols and parameters		Units	DF253-1250	Conditions
trr	Reverse recovery time	μs	4,0÷6,3 3,2÷5,0 2,5÷4,0	$T_{vj}=125^{\circ}\text{C}$, $I_F=1250\text{A}$, $U_R=100\text{V}$ $dI_R / dt = 50\text{A}/\mu\text{s}$ $dI_R / dt = 100\text{A}/\mu\text{s}$ $dI_R / dt = 200\text{A}/\mu\text{s}$
Qrr	Recovered charge	μC	220÷350 310÷490 430÷680	$T_{vj}=125^{\circ}\text{C}$, $I_F=1250\text{A}$, $U_R=100\text{V}$ $dI_R / dt = 50\text{A}/\mu\text{s}$ $dI_R / dt = 100\text{A}/\mu\text{s}$ $dI_R / dt = 200\text{A}/\mu\text{s}$
Rthjc	Thermal resistance junction to case	$^{\circ}\text{C}/\text{W}$	0,02	Direct current, double side cooled

ORDERING

	DF	253	1250	22	1	
	1	2	3	4	5	

1. Fast recovery diode.
2. Design version.
3. Mean forward current, A.
4. Voltage code (22 = 2200 V).
5. Group of reverse recovery time ($C4 \leq 6,3 \mu\text{s}$; $1 \leq 5 \mu\text{s}$; $2 \leq 4 \mu\text{s}$).



Mounting force : 19 ÷ 28 kN

Weight : 580 grams