



**THE DATASHEET OF  
DF233-400-24\_20MM**





**TET ESTEL AS**  
ESTONIA

**July**  
**2015**

**Series**  
**DF233-400**

**Fast Recovery Press-Pack**  
**Diode**  
**Type DF233-400**

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>400 A</b>	
Maximum repetitive peak reverse voltage					$U_{RRM}$	<b>1400 ÷ 2400 V</b>	
Reverse recovery time					<b>trr</b>	<b>3,2; 4,0; 5,0 μs</b>	
$U_{RRM}$ , V	1400	1500	1600	1800	2000	2200	2400
Voltage code	14	15	16	18	20	22	24
$T_{vj}$ , °C	- 60 ÷ 125						

**MAXIMUM ALLOWABLE RATINGS**

Symbols and parameters		Units	DF233-400	Conditions	
$I_{FAV}$	Mean forward current	A	400 720	$T_c=90^\circ\text{C}$ , $T_c=55^\circ\text{C}$ , 180° half-sine wave, 50 Hz	
$I_{FRMS}$	RMS forward current	A	628	$T_c=90^\circ\text{C}$	
$I_{FSM}$	Surge forward current	kA	8,3 9,0	$T_{vj}=125^\circ\text{C}$ $T_{vj}=25^\circ\text{C}$	tp=10 ms $U_R=0$
$I^2t$	Limiting load integral	$\text{kA}^2\text{s}$	344 405	$T_{vj}=125^\circ\text{C}$ $T_{vj}=25^\circ\text{C}$	
$U_{RRM}$	Repetitive peak reverse voltage	V	1400÷2400	$T_j \text{ min} \leq T_{vj} \leq T_{jM}$ 180° half-sine wave, 50 Hz	
$U_{RSM}$	Non-repetitive peak reverse voltage	V	1500÷2500	$T_j \text{ min} \leq T_{vj} \leq T_{jM}$ 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	2,0	$T_{vj}=25^\circ\text{C}$ , $I_{FM}=3,14 I_{FAV}$
$U_{F(TO)}$	Threshold voltage	V	1,1	$T_{vj}=125^\circ\text{C}$ $1,57 I_{FAV} < I_F < 4,71 I_{FAV}$
$R_T$	Forward slope resistance	$\text{m}\Omega$	0,74	
$I_{RRM}$	Repetitive peak reverse current	mA	50	$T_{vj}=125^\circ\text{C}$ , $U_R = U_{RRM}$

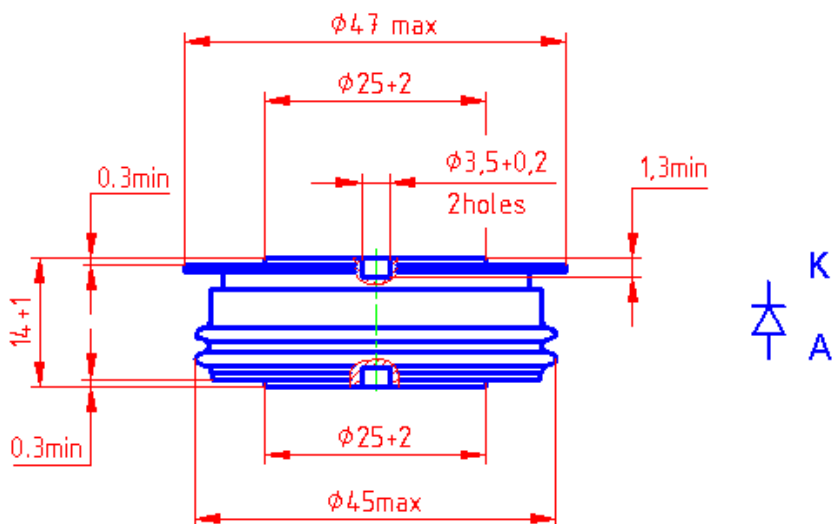
### CHARACTERISTICS

Symbols and parameters		Units	DF233-400	Conditions
trr	Reverse recovery time	$\mu\text{s}$	3,2 ÷ 5,0 2,5 ÷ 4,0 2,0 ÷ 3,2	$T_{vj}=125^{\circ}\text{C}$ , $I_F=400\text{A}$ , $U_R=100\text{V}$ $di_R / dt = 50\text{A}/\mu\text{s}$ $di_R / dt = 100\text{A}/\mu\text{s}$ $di_R / dt = 200\text{A}/\mu\text{s}$
Qrr	Recovered charge	$\mu\text{C}$	140 ÷ 230 190 ÷ 300 250 ÷ 380	$T_{vj}=125^{\circ}\text{C}$ , $I_F=400\text{A}$ , $U_R=100\text{V}$ $di_R / dt = 50\text{A}/\mu\text{s}$ $di_R / dt = 100\text{A}/\mu\text{s}$ $di_R / dt = 200\text{A}/\mu\text{s}$
Rthjc	Thermal resistance junction to case	$^{\circ}\text{C}/\text{W}$	0,04	Direct current, double side cooled

### ORDERING

	DF	233	400	22	3	
	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 ( $1 \leq 5,0 \mu\text{s}$ ;  $2 \leq 4,0 \mu\text{s}$ ;  $3 \leq 3,2 \mu\text{s}$ )



Mounting force : 8 ÷ 12 kN  
Weight : 120 grams

## Looking for pricing, stock, or lifecycle information?

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