



**TET ESTEL AS**  
ESTONIA

**April**  
**2015**

**Series**  
**DF251-200**  
**DF251-200X**

**Fast Recovery Stud-Mounted**  
**Diodes**  
**Type DF251-200,**  
**DF251-200X**

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>200 A</b>
Maximum repetitive peak reverse voltage	$U_{RRM}$											<b>600 ÷ 1600 V</b>
Reverse recovery time	$t_{rr}$											<b>2,5; 3,2; 4,0 μs</b>
$U_{RRM}$ , V	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	
Voltage code	6	7	8	9	10	11	12	13	14	15	16	
$T_{vj}$ , °C	- 60 ÷ 125											

**MAXIMUM ALLOWABLE RATINGS**

Symbols and parameters		Units	DF251-200 DF251-200X	Conditions
$I_{FAV}$	Mean forward current	A	200 270	$T_c=78^\circ\text{C}$ , $T_c=55^\circ\text{C}$ , 180° half-sine wave, 50 Hz
$I_{FRMS}$	RMS forward current	A	320	$T_c=78^\circ\text{C}$
$I_{FSM}$	Surge forward current	kA	4,0 4,5	$T_{vj}=125^\circ\text{C}$ $T_{vj}=25^\circ\text{C}$ tp=10 ms $U_R=0$
$I^2t$	Limiting load integral	kA <sup>2</sup> s	80 101	$T_{vj}=125^\circ\text{C}$ $T_{vj}=25^\circ\text{C}$
$U_{RRM}$	Repetitive peak reverse voltage	V	600÷1600	$T_{j\ min} \leq T_{vj} \leq T_{j\ M}$ 180° half-sine wave, 50 Hz
$U_{RSM}$	Non-repetitive peak reverse voltage	V	660÷1700	$T_{j\ min} \leq T_{vj} \leq T_{j\ M}$ 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	1,8	$T_{vj}=25^\circ\text{C}$ , $I_{FM}=3,14 I_{FAV}$
$U_{F(TO)}$	Threshold voltage	V	1,02	$T_{vj}=125^\circ\text{C}$
$R_T$	Forward slope resistance	mΩ	0,88	1,57 $I_{FAV} < I_F < 4,71 I_{FAV}$
$I_{RRM}$	Repetitive peak reverse current	mA	30	$T_{vj}=125^\circ\text{C}$ , $U_R = U_{RRM}$

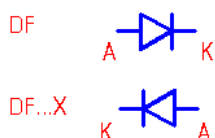
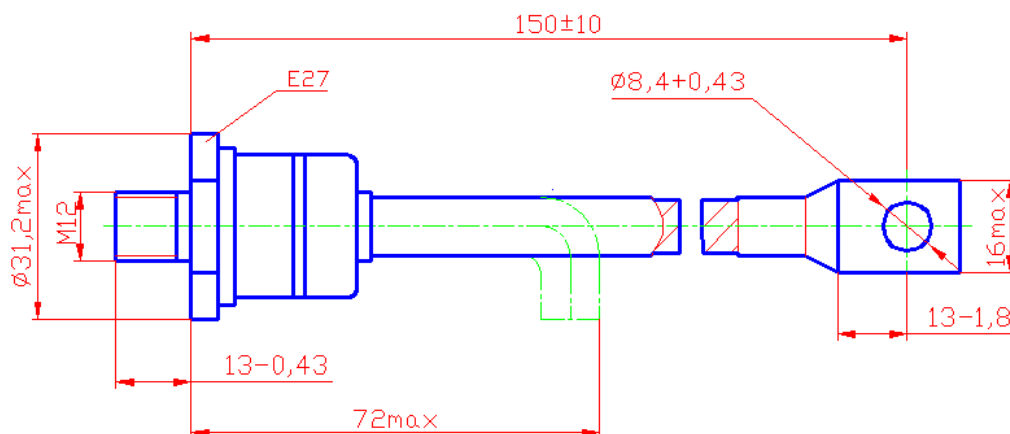
## CHARACTERISTICS

Symbols and parameters		Units	DF251-200	Conditions
			DF251-200X	
trr	Reverse recovery time	μs	2,5 ÷ 4,0 2,0 ÷ 3,2 1,6 ÷ 2,5	Tvj=125°C, If=200A, Ur=100V diR / dt = 50A/μs diR / dt = 100A/μs diR / dt = 200A/μs
Qrr	Recovered charge	μC	60 ÷ 100 80 ÷ 130 100 ÷ 150	Tvj=125°C, If=200A, Ur=100V diR / dt = 50A/μs diR / dt = 100A/μs diR / dt = 200A/μs
Rthjc	Thermal resistance junction to case	°C/W	0,16	Direct current

## ORDERING

	DF	251	200	X	14	3
	1	2	3	4	5	6

1. Fast recovery diode.
2. Design version.
3. Mean forward current, A.
4. Reverse polarity (cathode stud mounted), without X-normal polarity.
5. Voltage code (14 = 1400 V).
6. Group of reverse recovery time (2 ≤ 4,0 μs; 3 ≤ 3,2 μs; 4 ≤ 2,5 μs).



Tightening torque: 12 ÷ 18 Nm  
Weight : 150 grams