



**TET ESTEL AS**  
ESTONIA

**September**  
**2015**

**Series**  
**DF333-320**

**Fast Recovery Press-Pack**  
**Diode**  
**Type DF333-320**

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>320 A</b>	
Maximum repetitive peak reverse voltage					$U_{RRM}$	<b>2400 ÷ 3600 V</b>	
Reverse recovery time					$t_{rr}$	<b>3,2; 4,0; 5,0 μs</b>	
$U_{RRM}, V$	2400	2600	2800	3000	3200	3400	3600
Voltage code	24	26	28	30	32	34	36
$T_{vj}, °C$	- 60 ÷ 125						

**MAXIMUM ALLOWABLE RATINGS**

Symbols and parameters		Units	DF333-320	Conditions	
$I_{FAV}$	Mean forward current	A	320 605	$T_c=90 °C$ , $T_c=55 °C$ , 180° half-sine wave, 50 Hz	
$I_{FRMS}$	RMS forward current	A	502	$T_c=90 °C$	
$I_{FSM}$	Surge forward current	kA	7,0 7,7	$T_{vj}=125 °C$ $T_{vj}= 25 °C$	tp=10 ms $U_R=0$
$I^2t$	Limiting load integral	$kA^2s$	245 296	$T_{vj}=125 °C$ $T_{vj}= 25 °C$	
$U_{RRM}$	Repetitive peak reverse voltage	V	2400÷3600	$T_j \min \leq T_{vj} \leq T_{jM}$ 180° half-sine wave, 50 Hz	
$U_{RSM}$	Non-repetitive peak reverse voltage	V	2500÷3700	$T_j \min \leq T_{vj} \leq T_{jM}$ 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	2,7	$T_{vj}=25 °C$ , $I_{FM}=3,14 I_{FAV}$
$U_{F(TO)}$	Threshold voltage	V	1,55	$T_{vj}=125 °C$ $1,57 I_{FAV} < I_F < 4,71 I_{FAV}$
$R_T$	Forward slope resistance	mΩ	1,39	
$I_{RRM}$	Repetitive peak reverse current	mA	50	$T_{vj}=125 °C$ , $U_R = U_{RRM}$

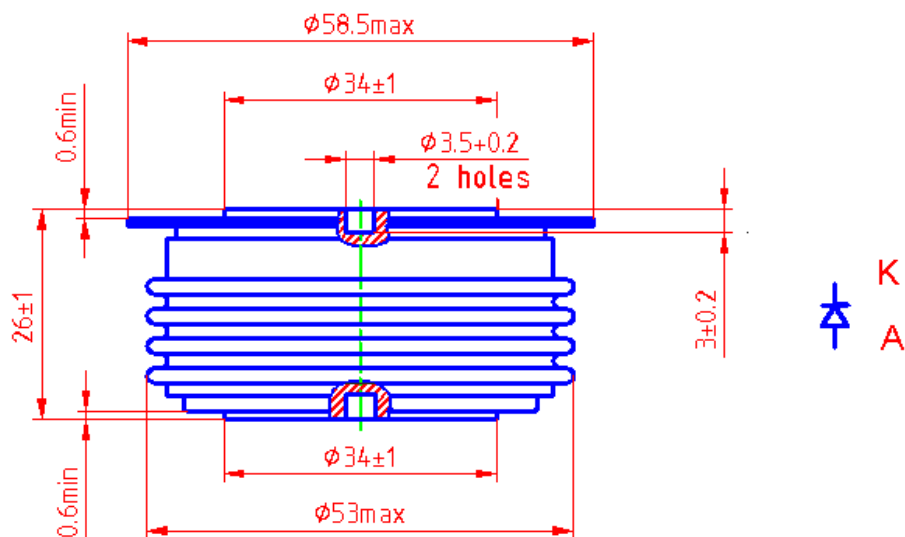
## CHARACTERISTICS

Symbols and parameters		Units	DF333-320	Conditions
trr	Reverse recovery time	μs	3,2 ÷ 5,0 2,5 ÷ 4,0 2,0 ÷ 3,2	Tvj=125°C, IF=320A, UR=100V diR / dt = 50A/μs diR / dt = 100A/μs diR / dt = 200A/μs
Qrr	Recovered charge	μC	170 ÷ 270 220 ÷ 350 260 ÷ 410	Tvj=125°C, IF=320A, UR=100V diR / dt = 50A/μs diR / dt = 100A/μs diR / dt = 200A/μs
Rthjc	Thermal resistance junction to case	°C/W	0,04	Direct current, double side cooled

## ORDERING

	DF	333	320	32	3	
	1	2	3	4	5	

1. Fast recovery diode.
2. Design version.
3. Mean forward current, A .
4. Voltage code (32 = 3200 V).
5. Group of reverse recovery time (1 ≤ 5,0 μs; 2 ≤ 4,0 μs; 3 ≤ 3,2 μs).



Mounting force : 10 ÷ 15 kN  
Weight : 250 grams