



**TET ESTEL AS**  
ESTONIA

**September**  
**2015**

**Series**  
**DF353-800**

**Fast Recovery Press-Pack**  
**Diode**  
**Type DF353-800**

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>800 A</b>	
Maximum repetitive peak reverse voltage	$U_{RRM}$				<b>2400 ÷ 3200 V</b>	
Reverse recovery time	<b>trr</b>				<b>4,0; 5,0; 6,3 μs</b>	
$U_{RRM}, V$	2400	2600	2800	3000	3200	
Voltage code	24	26	28	30	32	
$T_{vj}, °C$	- 60 ÷ 125					

**MAXIMUM ALLOWABLE RATINGS**

Symbols and parameters		Units	DF353-800	Conditions	
$I_{FAV}$	Mean forward current	A	800 1425	$T_c=90 °C,$ $T_c=55 °C,$ 180° half-sine wave, 50 Hz	
$I_{FRMS}$	RMS forward current	A	1255	$T_c=90 °C$	
$I_{FSM}$	Surge forward current	kA	19 21	$T_{vj}=125 °C$ $T_{vj}= 25 °C$	tp=10 ms $U_R=0$
$I^2t$	Limiting load integral	$kA^2s$	1805 2205	$T_{vj}=125 °C$ $T_{vj}= 25 °C$	
$U_{RRM}$	Repetitive peak reverse voltage	V	2400÷3200	$T_j \min \leq T_{vj} \leq T_{jM}$ 180° half-sine wave, 50 Hz	
$U_{RSM}$	Non-repetitive peak reverse voltage	V	2500÷3300	$T_j \min \leq T_{vj} \leq T_{jM}$ 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	1,4	$T_{vj}=125 °C$ $1,57 I_{FAV} < I_F < 4,71 I_{FAV}$
$R_T$	Forward slope resistance	$m\Omega$	0,3	
$I_{RRM}$	Repetitive peak reverse current	mA	75	$T_{vj}=125 °C,$ $U_R= U_{RRM}$

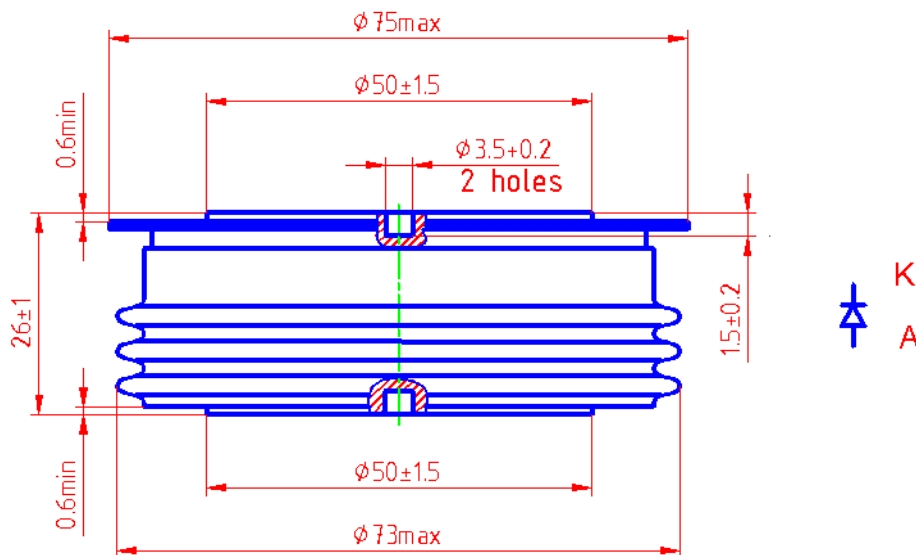
### CHARACTERISTICS

Symbols and parameters		Units	DF353-800	Conditions
trr	Reverse recovery time	$\mu\text{s}$	4,0 ÷ 6,3 3,2 ÷ 5,0 2,5 ÷ 4,0	$T_{vj}=125^{\circ}\text{C}$ , $I_F=800\text{A}$ , $U_R=100\text{V}$ $dI_R / dt = 50\text{A}/\mu\text{s}$ $dI_R / dt = 100\text{A}/\mu\text{s}$ $dI_R / dt = 200\text{A}/\mu\text{s}$
Qrr	Recovered charge	$\mu\text{C}$	200÷320 300÷450 400÷650	$T_{vj}=125^{\circ}\text{C}$ , $I_F=800\text{A}$ , $U_R=100\text{V}$ $dI_R / dt = 50\text{A}/\mu\text{s}$ $dI_R / dt = 100\text{A}/\mu\text{s}$ $dI_R / dt = 200\text{A}/\mu\text{s}$
Rthjc	Thermal resistance junction to case	$^{\circ}\text{C}/\text{W}$	0,02	Direct current, double side cooled

### ORDERING

	DF	353	800	30	2	
	1	2	3	4	5	

1. Fast recovery diode.
2. Design version.
3. Mean forward current, A.
4. Voltage code (30 = 3000 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