



**TET ESTEL AS**  
ESTONIA

**October**  
**2015**

**Series**  
**D453-800**

**Rectifier Press-Pack**  
**Diode**  
**Type D453-800**

Designed for rectifiers and industrial applications

Maximum mean forward current	<b>I<sub>FAV</sub></b>				<b>800 A</b>	
Maximum repetitive peak reverse voltage	<b>U<sub>RRM</sub></b>				<b>3400 ÷ 4400 V</b>	
Reverse recovery time	<b>trr (typ)</b>				<b>50 µs</b>	
U <sub>RRM</sub> , V	3400	3600	3800	4000	4200	4400
Voltage code	34	36	38	40	42	44
T <sub>vj</sub> , °C	- 60 ÷ 150					

**MAXIMUM ALLOWABLE RATINGS**

Symbols and parameters		Units	D453-800	Conditions	
I <sub>FAV</sub>	Mean forward current	A	800 1920	T <sub>c</sub> =123 °C, T <sub>c</sub> =55 °C, 180° half-sine wave, 50 Hz	
I <sub>FRMS</sub>	RMS forward current	A	1255	T <sub>c</sub> =123 °C	
I <sub>FSM</sub>	Surge forward current	kA	18 20	T <sub>vj</sub> =150°C T <sub>vj</sub> =25°C	tp=10 ms U <sub>R</sub> =0
I <sup>2</sup> t	Limiting load integral	kA <sup>2</sup> s	1620 2000	T <sub>vj</sub> =150°C T <sub>vj</sub> =25°C	
U <sub>RRM</sub>	Repetitive peak reverse voltage	V	3400÷4400	T <sub>j min</sub> ≤T <sub>vj</sub> ≤T <sub>jM</sub> 180° half-sine wave, 50 Hz	
U <sub>RSM</sub>	Non-repetitive peak reverse voltage	V	3500÷4500	T <sub>j min</sub> ≤T <sub>vj</sub> ≤T <sub>jM</sub> 180° half-sine wave tp=10 ms, Single pulse	
T <sub>stg</sub>	Storage temperature	°C	-60÷80		
T <sub>vj</sub>	Junction temperature	°C	-60÷150		

**CHARACTERISTICS**

U <sub>FM</sub>	Peak forward voltage	V	1,85	T <sub>vj</sub> =25°C, I <sub>TM</sub> =3,14 I <sub>TAV</sub>
U <sub>F(TO)</sub>	Threshold voltage	V	0,9	T <sub>vj</sub> =150°C 1,57 I <sub>TAV</sub> < I <sub>T</sub> < 4,71 I <sub>TAV</sub>
R <sub>T</sub>	Forward slope resistance	mΩ	0,33	
I <sub>RRM</sub>	Repetitive peak reverse current	mA	50	T <sub>vj</sub> =150°C, U <sub>R</sub> = U <sub>RRM</sub>

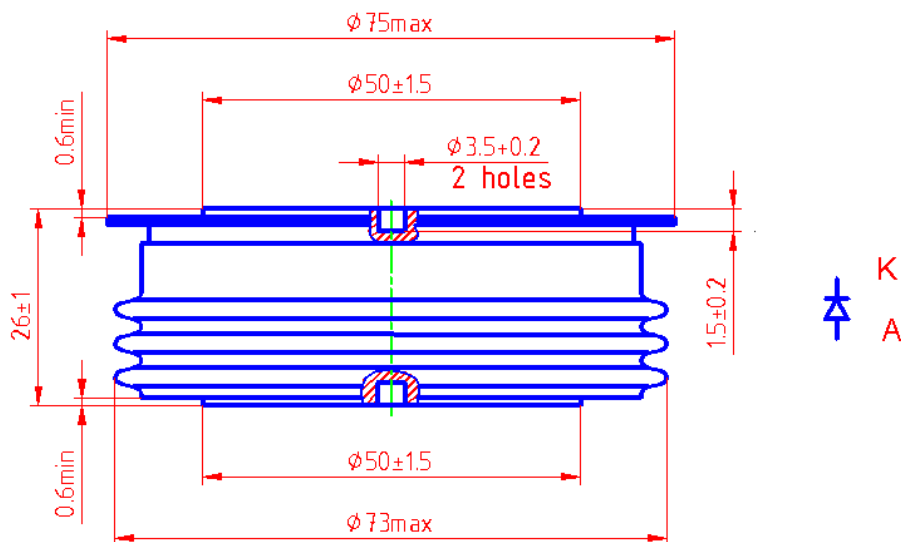
### CHARACTERISTICS

Symbols and parameters		Units	D453-800	Conditions
Qrr	Recovered charge (typ)	$\mu\text{C}$	4500	$T_{vj}=150^{\circ}\text{C}$ $I_F=800\text{A}$ $di_R/dt=10\text{ A}/\mu\text{s}$ $U_R=100\text{V}$
trr	Reverse recovery time (typ)	$\mu\text{s}$	50	
Irrm	Peak reverse recovery current (typ)	A	180	
Rthjc	Thermal resistance junction to case	$^{\circ}\text{C}/\text{W}$	0,02	Direct current, double side cooled

### ORDERING

	<b>D</b>	<b>453</b>	<b>800</b>	<b>40</b>	
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	

1. Diode
2. Design version
3. Mean forward current, A
4. Voltage code (40=4000 V)



Mounting force : 19 ÷ 28 kN

Weight : 580 grams