



TET ESTEL AS
ESTONIA

June
2013

Series
D553-800

Rectifier Press-Pack
Diode
Type D553-800

Designed for rectifiers and industrial applications

Maximum mean forward current	I_{FAV}						800 A		
Maximum repetitive peak reverse voltage	U_{RRM}						4400 ÷ 6000 V		
Reverse recovery time	t_{rr} (typ)						60 μs		
U_{RRM} , V	4400	4600	4800	5000	5200	5400	5600	5800	6000
Voltage code	44	46	48	50	52	54	56	58	60
T_{vj} , °C	- 60 ÷ 150								

MAXIMUM ALLOWABLE RATINGS

Symbols and parameters		Units	D553-800	Conditions	
I_{FAV}	Mean forward current	A	800 1700	$T_c=120\text{ }^\circ\text{C}$, $T_c=55\text{ }^\circ\text{C}$, 180° half-sine wave, 50 Hz	
I_{FRMS}	RMS forward current	A	1255	$T_c=120\text{ }^\circ\text{C}$	
I_{FSM}	Surge forward current	kA	16 18	$T_{vj}=150\text{ }^\circ\text{C}$ $T_{vj}=25\text{ }^\circ\text{C}$	tp=10 ms $U_R=0$
I^2t	Limiting load integral	kA^2s	1280 1620	$T_{vj}=150\text{ }^\circ\text{C}$ $T_{vj}=25\text{ }^\circ\text{C}$	
U_{RRM}	Repetitive peak reverse voltage	V	4400÷6000	$T_j \text{ min} \leq T_{vj} \leq T_{jM}$ 180° half-sine wave, 50 Hz	
U_{RSM}	Non-repetitive peak reverse voltage	V	4500÷6100	$T_j \text{ min} \leq T_{vj} \leq T_{jM}$ 180° half-sine wave tp=10 ms, Single pulse	
T_{stg}	Storage temperature	°C	-60÷80		
T_{vj}	Junction temperature	°C	-60÷150		

CHARACTERISTICS

U_{FM}	Peak forward voltage	V	1,85	$T_{vj}=25\text{ }^\circ\text{C}$, $I_{TM}=3,14 I_{TAV}$
$U_{F(TO)}$	Threshold voltage	V	1,05	$T_{vj}=150\text{ }^\circ\text{C}$ $1,57 I_{TAV} < I_T < 4,71 I_{TAV}$
R_T	Forward slope resistance	m Ω	0,41	
I_{RRM}	Repetitive peak reverse current	mA	100	$T_{vj}=150\text{ }^\circ\text{C}$, $U_R = U_{RRM}$

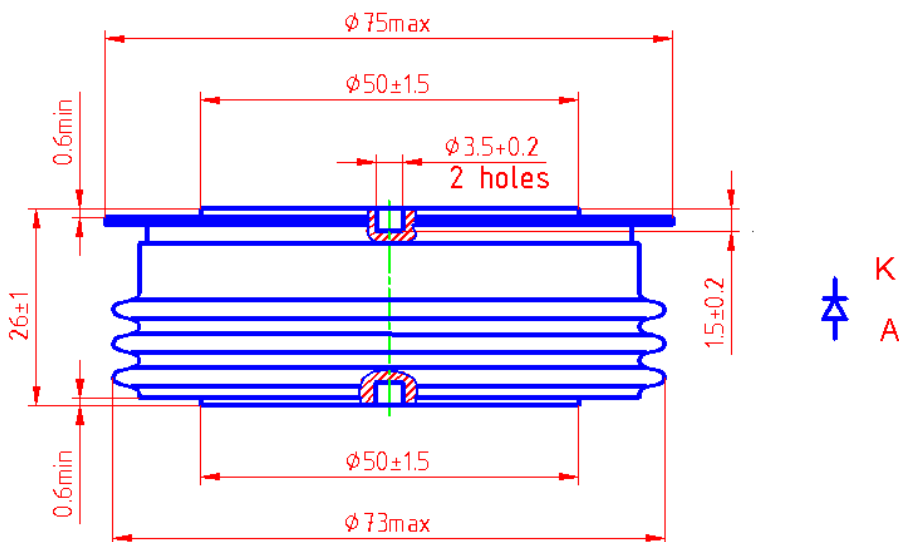
CHARACTERISTICS

Symbols and parameters		Units	D553-800	Conditions
Qrr	Recovered charge (typ)	μC	6000	$T_{vj}=150^{\circ}\text{C}$ $I_F=800\text{A}$ $di_R/dt=10\text{ A}/\mu\text{s}$ $U_R=100\text{V}$
trr	Reverse recovery time (typ)	μs	60	
Irrm	Peak reverse recovery current (typ)	A	200	
Rthjc	Thermal resistance junction to case	$^{\circ}\text{C}/\text{W}$	0,02	Direct current, double side cooled

ORDERING

	D	553	800	56	
	1	2	3	4	

1. Diode
2. Design version
3. Mean forward current, A
4. Voltage code (56=5600 V)



Mounting force : 19 ÷ 28 kN

Weight : 580 grams