



TET ESTEL AS
ESTONIA

January
2016

Series
D143-1000

Rectifier Press-Pack
Diode
Type D143-1000

Designed for rectifiers and industrial applications

Maximum mean forward current	I_{FAV}										1000 A
Maximum repetitive peak reverse voltage	U_{RRM}										800 ÷ 1800 V
Reverse recovery time	trr (typ)										30 μs
U _{RRM} , V	800	900	1000	1100	1200	1300	1400	1500	1600	1800	
Voltage code	8	9	10	11	12	13	14	15	16	18	
T _{vj} , °C	- 60 ÷ 175										

MAXIMUM ALLOWABLE RATINGS

Symbols and parameters		Units	D143-1000	Conditions
I _{FAV}	Mean forward current	A	1000 1870	T _c = 125°C, T _c = 55°C, 180° half-sine wave, 50 Hz
I _{FRMS}	RMS forward current	A	1570	T _c = 125 °C
I _{FSM}	Surge forward current	kA	18 20	T _{vj} =175°C T _{vj} =25°C
I ² _t	Limiting load integral	kA ² s	1620 2000	T _{vj} =175°C T _{vj} =25°C
U _{RRM}	Repetitive peak reverse voltage	V	800÷1800	T _{j min} ≤T _{vj} ≤T _{jM} 180° half-sine wave, 50 Hz
U _{RSM}	Non-repetitive peak reverse voltage	V	900÷1900	T _{j min} ≤T _{vj} ≤T _{jM} 180° half-sine wave tp=10 ms, Single pulse
T _{stg}	Storage temperature	°C	-60÷80	
T _{vj}	Junction temperature	°C	-60÷175	

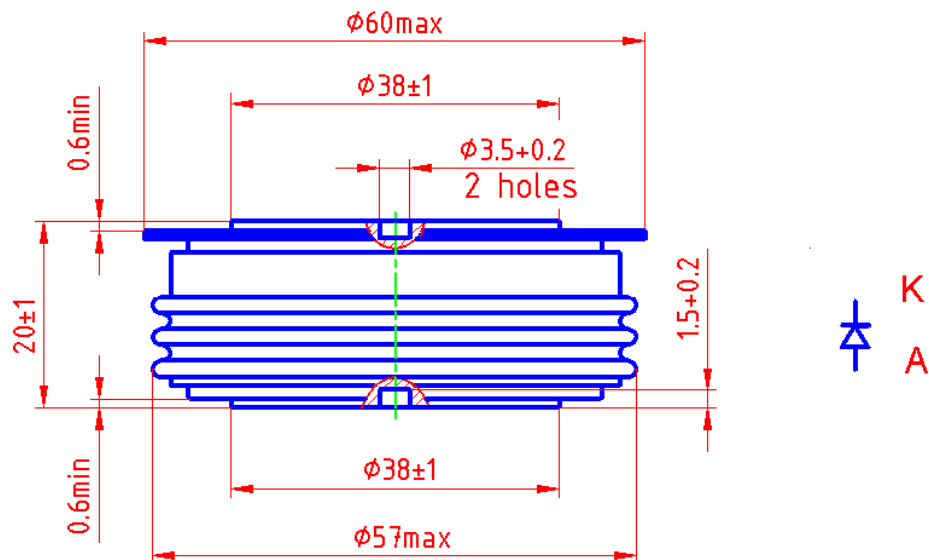
CHARACTERISTICS

U _{FM}	Peak forward voltage	V	1,65	T _{vj} =25°C, I _{TM} =3,14 I _{TAV}
U _{F(TO)}	Threshold voltage	V	0,9	T _{vj} =175°C 1,57 I _{TAV} < I _T <4,71 I _{TAV}
R _T	Forward slope resistance	mΩ	0,27	
I _{RRM}	Repetitive peak reverse current	mA	50	T _{vj} =175°C, U _R = U _{RRM}

CHARACTERISTICS				
Symbols and parameters		Units	D143-1000	Conditions
Qrr	Recovered charge (typ)	μC	2000	$T_{vj}=175^{\circ}\text{C}$ $I_F=1000\text{ A}$ $di_R/dt =10\text{ A}/\mu\text{s}$ $U_R=100\text{V}$
trr	Reverse recovery time (typ)	μs	30	
Irrm	Peak reverse recovery current (typ)	A	130	
Rthjc	Thermal resistance junction to case	$^{\circ}\text{C}/\text{W}$	0,03	Direct current, double side cooled

ORDERING					
	D	143	1000	16	
	1	2	3	4	

1. Diode
2. Design version
3. Mean forward current, A
4. Voltage code (16=1600 V)



Mounting force : 13 ÷ 19 kN
Weight : 260 grams