



TET ESTEL AS
ESTONIA

January
2016

Series
D143-1250

Rectifier Press-Pack
Diode
Type D143-1250

Designed for rectifiers and industrial applications

Maximum mean forward current							I_{FAV}	1250 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	D143-1250	Conditions
I_{FAV}	Mean forward current	A	1250 1985	$T_c = 113^\circ\text{C}$, $T_c = 55^\circ\text{C}$, 180° half-sine wave, 50 Hz
I_{FRMS}	RMS forward current	A	1960	$T_c = 113^\circ\text{C}$
I_{FSM}	Surge forward current	kA	20 22	$T_{vj} = 175^\circ\text{C}$ $T_{vj} = 25^\circ\text{C}$ tp=10 ms $U_R = 0$
I^2t	Limiting load integral	kA^2s	2000 2420	$T_{vj} = 175^\circ\text{C}$ $T_{vj} = 25^\circ\text{C}$
U_{RRM}	Repetitive peak reverse voltage	V	800 ÷ 1800	$T_j \min \leq T_{vj} \leq T_{jM}$ 180° half-sine wave, 50 Hz
U_{RSM}	Non-repetitive peak reverse voltage	V	900 ÷ 1900	$T_j \min \leq T_{vj} \leq T_{jM}$ 180° half-sine wave tp=10 ms, Single pulse
T_{stg}	Storage temperature	°C	-60 ÷ 80	
T_{vj}	Junction temperature	°C	-60 ÷ 175	

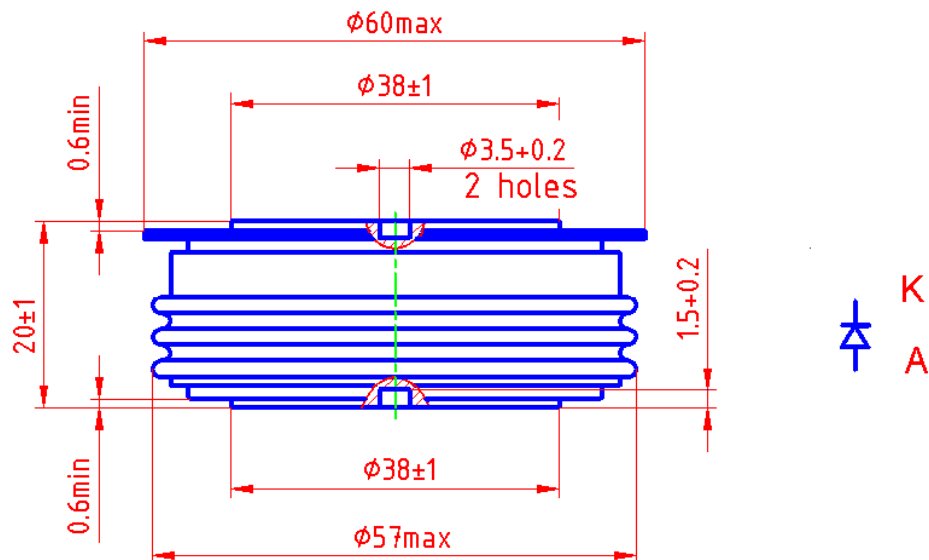
CHARACTERISTICS

U_{FM}	Peak forward voltage	V	1,75	$T_{vj} = 25^\circ\text{C}$, $I_{TM} = 3,14 I_{TAV}$
$U_{F(TO)}$	Threshold voltage	V	0,95	$T_{vj} = 175^\circ\text{C}$ $1,57 I_{TAV} < I_T < 4,71 I_{TAV}$
R_T	Forward slope resistance	$\text{m}\Omega$	0,22	
I_{RRM}	Repetitive peak reverse current	mA	50	$T_{vj} = 175^\circ\text{C}$, $U_R = U_{RRM}$

CHARACTERISTICS				
Symbols and parameters		Units	D143-1250	Conditions
Qrr	Recovered charge (typ)	μC	2250	$T_{vj}=175^{\circ}\text{C}$ $I_F=1250\text{ A}$ $di_R/dt =10\text{ A}/\mu\text{s}$ $U_R=100\text{V}$
trr	Reverse recovery time (typ)	μs	30	
Irrm	Peak reverse recovery current (typ)	A	150	
Rthjc	Thermal resistance junction to case	$^{\circ}\text{C}/\text{W}$	0,03	Direct current, double side cooled

ORDERING					
	D	143	1250	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