



TET ESTEL AS
ESTONIA

July
2013

Series
D161-400
D161-400X

Rectifier Stud-Mounted
Diodes
Type D161-400,
D161-400X

Designed for rectifiers and industrial applications

Maximum mean forward current					I_{FAV}	400 A		
Maximum repetitive peak reverse voltage					U_{RRM}	1000 ÷ 1800 V		
Reverse recovery time					trr (typ)	22 μs		
U_{RRM}, V	1000	1100	1200	1300	1400	1500	1600	1800
Voltage code	10	11	12	13	14	15	16	18
$T_{vj}, °C$	- 60 ÷ 175							

MAXIMUM ALLOWABLE RATINGS

Symbols and parameters		Units	D161-400 D161-400X	Conditions
I_{FAV}	Mean forward current	A	400 565	$T_c=110°C$, $T_c=70°C$, 180° half-sine wave, 50 Hz
I_{FRMS}	RMS forward current	A	502	$T_c=110°C$
I_{FSM}	Surge forward current	kA	7,5 8,0	$T_{vj}=175°C$ $T_{vj}=25°C$ tp=10 ms $U_R=0$
I^2t	Limiting load integral	kA ² s	280 320	$T_{vj}=175°C$ $T_{vj}=25°C$
U_{RRM}	Repetitive peak reverse voltage	V	1000÷1800	$T_j \min \leq T_{vj} \leq T_{jM}$ 180° half-sine wave, 50 Hz
U_{RSM}	Non-repetitive peak reverse voltage	V	1100÷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	1,55	$T_{vj}=25°C$, $I_{FM}=3,14 I_{FAV}$
$U_{F(TO)}$	Threshold voltage	V	0,8	$T_{vj}=175°C$ $1,57 I_{FAV} < I_F < 4,71 I_{FAV}$
R_T	Forward slope resistance	mΩ	0,53	
I_{RRM}	Repetitive peak reverse current	mA	40	$T_{vj}=175°C$, $U_R = U_{RRM}$

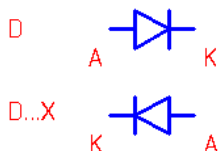
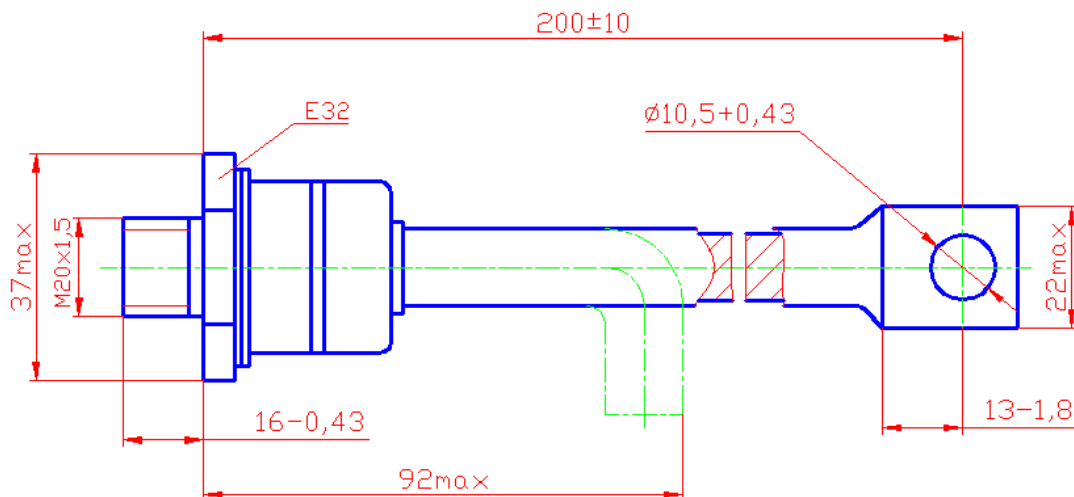
CHARACTERISTICS

Symbols and parameters		Units	D161-400 D161-400X	Conditions
Q _{rr}	Recovered charge (typ)	μC	1000	T _{vj} =175°C, I _F =400A, U _R =100V di _R / dt = 10A/μs
t _{rr}	Reverse recovery time (typ)	μS	22	
I _{rrm}	Peak reverse recovery current (typ)	A	92	
R _{thjc}	Thermal resistance junction to case	°C/W	0,12	Direct current

ORDERING

	D	161	400	X	12	
	1	2	3	4	5	

1. Diode
2. Design version
3. Mean forward current, A
4. Reverse polarity (cathode stud mounted), without X-normal polarity
5. Voltage code (12 = 1200 V)



Tightening torque: 24 ÷ 36 Nm
Weight : 280 grams

Diodes can be supplied in the packages with the framework of 16x1,5 in accordance to the customer.