



**TET ESTEL AS**  
ESTONIA

**June**  
**2013**

**Series**  
**D271-400**  
**D271-400X**

**Rectifier Stud-Mounted**  
**Diodes**  
**Type D271-400,**  
**D271-400X**

Designed for rectifiers and industrial applications.

Maximum mean forward current					$I_{FAV}$	<b>400 A</b>		
Maximum repetitive peak reverse voltage					$U_{RRM}$	<b>1000 ÷ 1800 V</b>		
Reverse recovery time					<b>trr (typ)</b>	<b>22 μs</b>		
$U_{RRM}$ , 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	D271-400 D271-400X	Conditions
$I_{FAV}$	Mean forward current	A	400 740	$T_c=130\text{ °C}$ , $T_c=70\text{ °C}$ , 180° half-sine wave, 50 Hz
$I_{FRMS}$	RMS forward current	A	628	$T_c=130\text{ °C}$
$I_{FSM}$	Surge forward current	kA	12 13	$T_{vj}=175\text{ °C}$ $T_{vj}=25\text{ °C}$ tp=10 ms $U_R=0$
$I^2t$	Limiting load integral	kA <sup>2</sup> s	720 845	$T_{vj}=175\text{ °C}$ $T_{vj}=25\text{ °C}$
$U_{RRM}$	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	1,45	$T_{vj}=25\text{ °C}$ , $I_{FM}=3,14 I_{FAV}$
$U_{F(TO)}$	Threshold voltage	V	0,85	$T_{vj}=175\text{ °C}$
$R_T$	Forward slope resistance	mΩ	0,5	$1,57 I_{FAV} < I_F < 4,71 I_{FAV}$
$I_{RRM}$	Repetitive peak reverse current	mA	50	$T_{vj}=175\text{ °C}$ , $U_R = U_{RRM}$

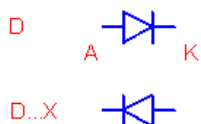
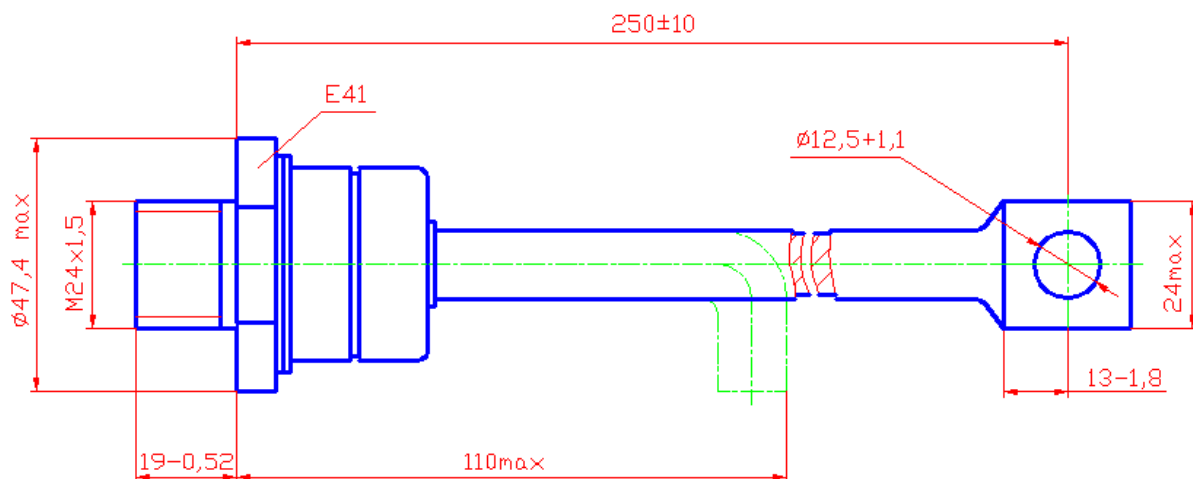
## CHARACTERISTICS

Symbols and parameters		Units	D271-400 D271-400X	Conditions
Q <sub>rr</sub>	Recovered charge (typ)	μC	1200	T <sub>vj</sub> =175°C, I <sub>F</sub> =400A, U <sub>R</sub> =100V di <sub>R</sub> / dt = 10A/μs
t <sub>rr</sub>	Reverse recovery time (typ)	μS	22	
I <sub>rrm</sub>	Peak reverse recovery current (typ)	A	110	
R <sub>thjc</sub>	Thermal resistance junction to case	°C/W	0,08	Direct current

## ORDERING

	D	271	400	X	16	
	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 (16 = 1600 V)



Tightening torque: 40 ÷ 60 Nm  
Weight : 480 grams