



TET ESTEL AS
ESTONIA

June
2013

Series
D271-500
D271-500X

Rectifier Stud-Mounted
Diodes
Type D271-500,
D271-500X

Designed for rectifiers and industrial applications.

Maximum mean forward current					I_{FAV}	500 A		
Maximum repetitive peak reverse voltage					U_{RRM}	1000 ÷ 1800 V		
Reverse recovery time					trr (typ)	25 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	D271-500 D271-500X	Conditions
I_{FAV}	Mean forward current	A	500 800	$T_c=120\text{ °C}$, $T_c=70\text{ °C}$, 180° half-sine wave, 50 Hz
I_{FRMS}	RMS forward current	A	785	$T_c=120\text{ °C}$
I_{FSM}	Surge forward current	kA	13 14	$T_{vj}=175\text{ °C}$ $T_{vj}=25\text{ °C}$ tp=10 ms $U_R=0$
I^2t	Limiting load integral	kA ² s	845 980	$T_{vj}=175\text{ °C}$ $T_{vj}=25\text{ °C}$
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	1,5	$T_{vj}=25\text{ °C}$, $I_{FM}=3,14 I_{FAV}$
$U_{F(TO)}$	Threshold voltage	V	0,85	$T_{vj}=175\text{ °C}$
R_T	Forward slope resistance	mΩ	0,4	$1,57 I_{FAV} < I_F < 4,71 I_{FAV}$
I_{RRM}	Repetitive peak reverse current	mA	50	$T_{vj}=175\text{ °C}$, $U_R = U_{RRM}$

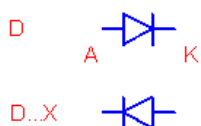
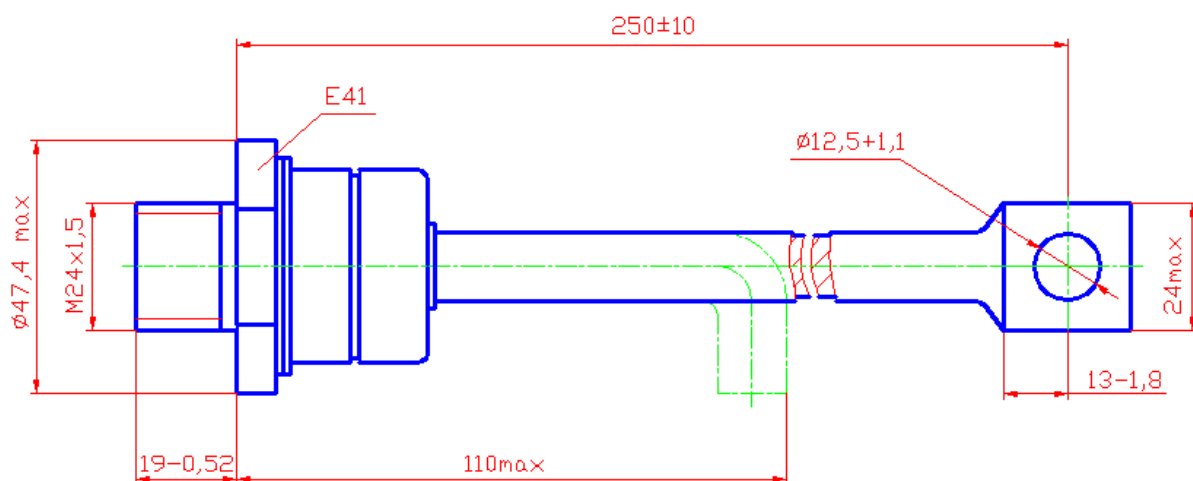
CHARACTERISTICS

Symbols and parameters		Units	D271-500 D271-500X	Conditions
Qrr	Recovered charge (typ)	μC	1500	Tvj=175°C, If=500A, UR=100V diR / dt = 10A/μs
trr	Reverse recovery time (typ)	μS	25	
Irrm	Peak reverse recovery current (typ)	A	120	
Rthjc	Thermal resistance junction to case	°C/W	0,08	Direct current

ORDERING

	D	271	500	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