



TET ESTEL AS
ESTONIA

December
2014

Series
D272-500
D272-500X

Rectifier Stud-Mounted
Diodes
Type D272-500,
D272-500X

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	D272-500 D272-500X	Conditions
I_{FAV}	Mean forward current	A	500 800	$T_c=120 °C,$ $T_c=70 °C,$ 180° half-sine wave, 50 Hz
I_{FRMS}	RMS forward current	A	785	$T_c=120 °C$
I_{FSM}	Surge forward current	kA	13 14	$T_{vj}=175 °C$ $T_{vj}= 25 °C$ tp=10 ms $U_R=0$
I^2t	Limiting load integral	kA^2s	845 980	$T_{vj}=175 °C$ $T_{vj}= 25 °C$
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	1,5	$T_{vj}=25 °C, I_{FM}=3,14 I_{FAV}$
$U_{F(TO)}$	Threshold voltage	V	0,85	$T_{vj}=175 °C$ $1,57 I_{FAV} < I_F < 4,71 I_{FAV}$
R_T	Forward slope resistance	mΩ	0,4	
I_{RRM}	Repetitive peak reverse current	mA	50	$T_{vj}=175 °C,$ $U_R = U_{RRM}$

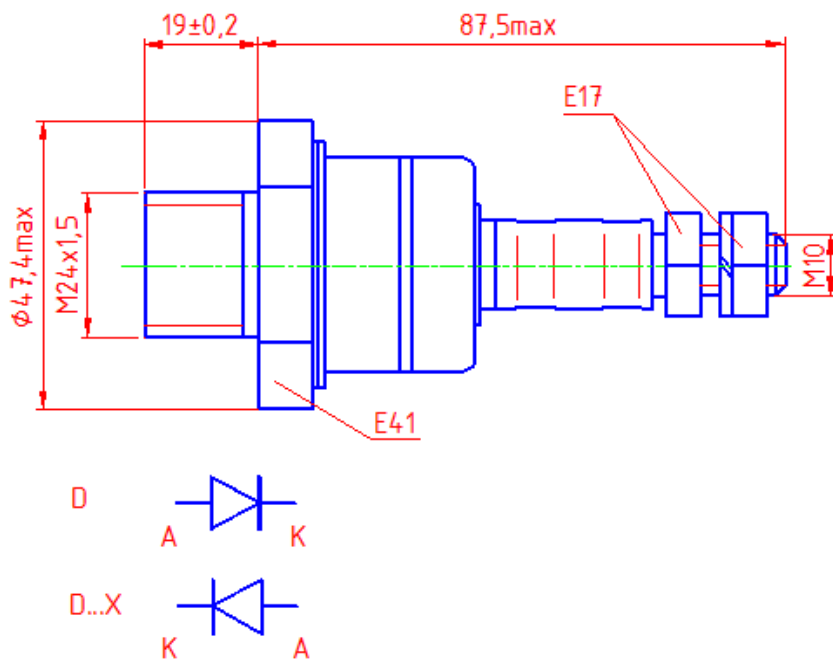
CHARACTERISTICS

Symbols and parameters		Units	D272-500 D272-500X	Conditions
Q _{rr}	Recovered charge (typ)	μC	1500	T _{vj} =175°C, I _F =500A, U _R =100V di _R / dt = 10A/μs
t _{rr}	Reverse recovery time (typ)	μS	25	
I _{rrm}	Peak reverse recovery current (typ)	A	120	
R _{thjc}	Thermal resistance junction to case	°C/W	0,08	Direct current

ORDERING

	D	272	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).



Mounting of diodes with a rigid cathode gate should be carried through a flexible conductor.

Tightening torque: 40 ÷ 60 Nm
Weight : 380 grams