



TET ESTEL AS
ESTONIA

May
2015

Series
DF252-160
DF252-160X

Fast Recovery Stud-Mounted
Diodes
Type DF252-160,
DF252-160X

For use as high-power inverters,
fly-wheel diodes in DC choppers,
power supplies as high frequency rectifier

Maximum mean forward current	I_{FAV}											160 A
Maximum repetitive peak reverse voltage	U_{RRM}											600 ÷ 1600 V
Reverse recovery time	trr											2,0; 2,5; 3,2 μs
U_{RRM}, V	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	
Voltage code	6	7	8	9	10	11	12	13	14	15	16	
$T_{vj}, °C$	- 60 ÷ 125											

MAXIMUM ALLOWABLE RATINGS

Symbols and parameters		Units	DF252-160 DF252-160X	Conditions
I_{FAV}	Mean forward current	A	160 245	$T_c=83 °C$, $T_c=55 °C$, 180° half-sine wave, 50 Hz
I_{FRMS}	RMS forward current	A	250	$T_c=83 °C$
I_{FSM}	Surge forward current	kA	3,5 4,0	$T_{vj}=125 °C$ $T_{vj}= 25 °C$ tp=10 ms $U_R=0$
I^2t	Limiting load integral	kA^2s	61 80	$T_{vj}=125 °C$ $T_{vj}= 25 °C$
U_{RRM}	Repetitive peak reverse voltage	V	600÷1600	$T_j \min \leq T_{vj} \leq T_{jM}$ 180° half-sine wave, 50 Hz
U_{RSM}	Non-repetitive peak reverse voltage	V	660÷1700	$T_j \min \leq T_{vj} \leq T_{jM}$ 180° half-sine wave tp=10 ms, Single pulse
T_{stg}	Storage temperature	°C	-60÷80	
T_{vj}	Junction temperature	°C	-60÷125	

CHARACTERISTICS

U_{FM}	Peak forward voltage	V	1,7	$T_{vj}=25 °C$, $I_{FM}=3,14 I_{FAV}$
$U_{F(TO)}$	Threshold voltage	V	0,97	$T_{vj}=125 °C$
R_T	Forward slope resistance	$m\Omega$	1,0	$1,57 I_{FAV} < I_F < 4,71 I_{FAV}$
I_{RRM}	Repetitive peak reverse current	mA	30	$T_{vj}=125 °C$, $U_R= U_{RRM}$

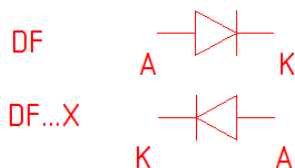
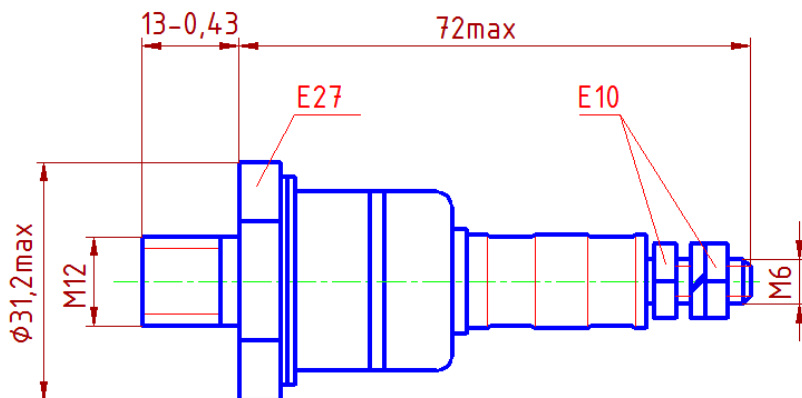
CHARACTERISTICS

Symbols and parameters		Units	DF252-160 DF252-160X	Conditions
trr	Reverse recovery time	μs	2,0 ÷ 3,2 1,6 ÷ 2,5 1,25 ÷ 2,0	T _{vj} =125°C, I _F =160A, U _R =100V di _R / dt = 50A/μs di _R / dt = 100A/μs di _R / dt = 200A/μs
Q _{rr}	Recovered charge	μC	40 ÷ 80 60 ÷ 100 70 ÷ 120	T _{vj} =125°C, I _F =160A, U _R =100V di _R / dt = 50A/μs di _R / dt = 100A/μs di _R / dt = 200A/μs
R _{thjc}	Thermal resistance junction to case	°C/W	0,18	Direct current

ORDERING

	DF	252	160	X	14	4
	1	2	3	4	5	6

1. Fast recovery diode.
2. Design version.
3. Mean forward current, A .
4. Reverse polarity (cathode stud mounted), without X-normal polarity.
5. Voltage code (14 = 1400 V).
6. Group of reverse recovery time (3 ≤ 3,2 μs; 4 ≤ 2,5 μs; 5 ≤ 2,0 μs).



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

Tightening torque: 12 ÷ 18 Nm (thread M12)

Tightening torque: 1,5 ÷ 1,7 Nm (thread M6)

Weight: 140 grams