



TET ESTEL AS
ESTONIA

May
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Series
DL253-1600

Avalanche Rectifier Press-Pack
Diode
Type DL253-1600

Guaranteed maximum avalanche power dissipation.
Designed for rectifiers and industrial applications.

Maximum mean forward current	I_{FAV}	1600 A			
Maximum repetitive peak reverse voltage	U_{RRM}	1600 ÷ 2400 V			
Surge reverse power dissipation	P_{RSM}	16kW			
Reverse recovery time	t_{rr} (typ)	40 μs			
U_{RRM} , V	1600	1800	2000	2200	2400
Voltage code	16	18	20	22	24
T_{vj} , °C	- 60 ÷ 150				

MAXIMUM ALLOWABLE RATINGS

Symbols and parameters		Units	DL253-1600	Conditions
I_{FAV}	Mean forward current	A	1600 2944	$T_c=107^\circ\text{C}$, $T_c=55^\circ\text{C}$, 180° half-sine wave, 50 Hz
I_{FRMS}	RMS forward current	A	2512	$T_c=107^\circ\text{C}$
I_{FSM}	Surge forward current	kA	27 29	$T_{vj}=150^\circ\text{C}$ $T_{vj}=25^\circ\text{C}$ tp=10 ms $U_R=0$
I^2t	Limiting load integral	kA ² s	3645 4205	$T_{vj}=150^\circ\text{C}$ $T_{vj}=25^\circ\text{C}$
U_{RRM}	Repetitive peak reverse voltage	V	1600÷2400	$T_j \text{ min} \leq T_{vj} \leq T_{jM}$ 180° half-sine wave, 50 Hz
U_{BR}	Reverse breakdown voltage	V	2000÷3000	$T_j \text{ min} \leq T_{vj} \leq T_{jM}$ 180° half-sine wave, 50 Hz $I_R=10\text{mA}$
P_{RSM}	Surge reverse power dissipation	kW	16	$T_{vj}=150^\circ\text{C}$; tp=100 μ s; 180° half-sine wave
T_{stg}	Storage temperature	°C	-60÷80	
T_{vj}	Junction temperature	°C	-60÷150	

CHARACTERISTICS

U_{FM}	Peak forward voltage	V	1,8	$T_{vj}=25^\circ\text{C}$, $I_{TM}=3,14 I_{TAV}$
$U_{F(TO)}$	Threshold voltage	V	0,9	$T_{vj}=150^\circ\text{C}$ 1,57 $I_{TAV} < I_T < 4,71 I_{TAV}$
R_T	Forward slope resistance	m Ω	0,11	

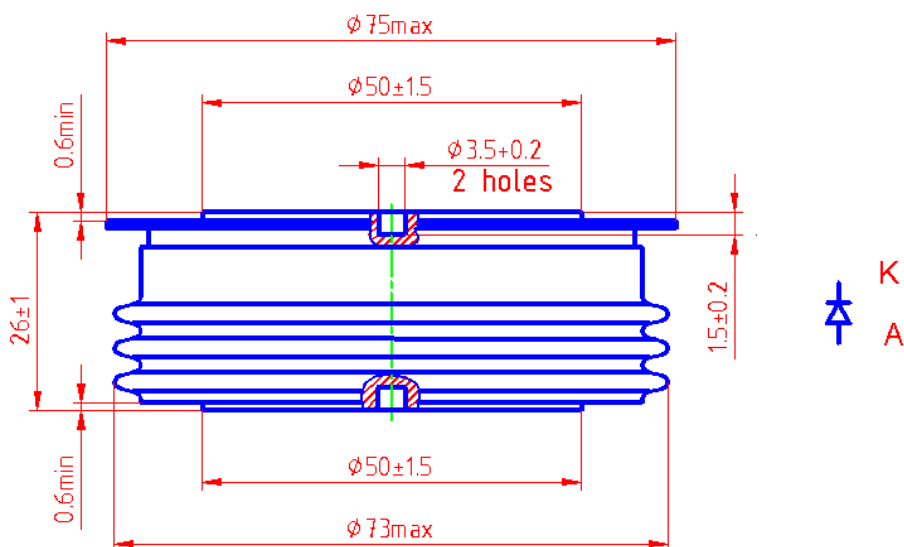
CHARACTERISTICS

Symbols and parameters		Units	DL253-1600	Conditions
I _{RRM}	Repetitive peak reverse current	mA	40	T _{vj} =150°C, U _R = U _{RRM}
Q _{rr}	Recovered charge (typ)	μC	4000	T _{vj} =150°C I _F =1600 A di _R /dt =10 A/μs U _R =100V
t _{rr}	Reverse recovery time (typ)	μs	40	
I _{rrm}	Peak reverse recovery current (typ)	A	200	
R _{thjc}	Thermal resistance junction to case	°C/W	0,02	Direct current, double side cooled

ORDERING

	DL	253	1600	24	
	1	2	3	4	

1. Avalanche diode
2. Design version
3. Mean forward current, A
4. Voltage code (24=2400 V)



Mounting force : 19 ÷ 28 kN
Weight : 580 grams