

RECTIFIER DIODE D161-250, D161-250X

<ul style="list-style-type: none"> ◆ $V_{RRM} = \mathbf{300 - 1800\ V}$ (D161-250) ◆ $V_{RRM} = \mathbf{300 - 1600\ V}$ (D161-250X) ◆ $I_{F(AV)} = \mathbf{250\ A}$ ($T_C = 140\ ^\circ\text{C}$) ◆ $I_{FSM} = \mathbf{6,4\ kA}$ ($T_j = 190\ ^\circ\text{C}$) 		
<ul style="list-style-type: none"> ◆ Hermetic metal cases with ceramic insulators ◆ Pressure contact design ◆ Threaded studs of ISO ◆ Low dispersion Q_{rr} and V_{FM} for series and parallel connections ◆ Direct and revers polarity ◆ Simple creation of rectifiers on heatsink 		

MAXIMUM RATED VALUES

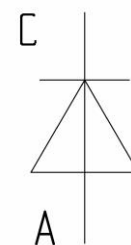
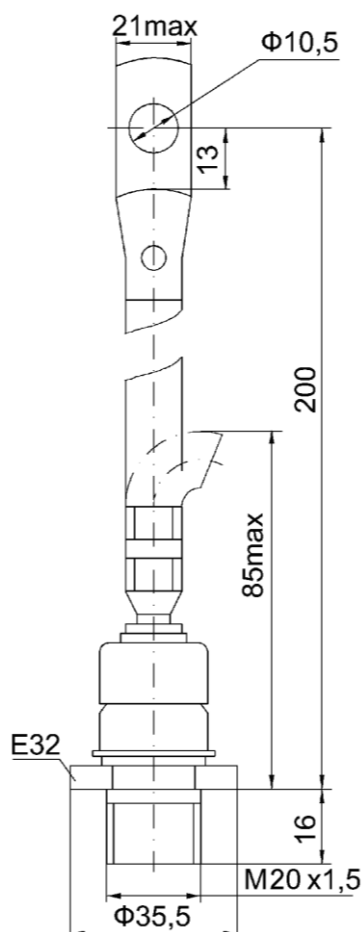
Parameter and conditions	Symbol	Values	Units
Repetitive peak reverse voltage, $T_j = -60 \dots + 190\ ^\circ\text{C}$	V_{RRM}	D161-250 D161-250X	V
		300-1800 300-1600	
Non- repetitive peak reverse voltage, $T_j = -60 \dots + 190\ ^\circ\text{C}$	V_{RSM}	D161-250 D161-250X	
		400-1900 400-1700	
Repetitive peak reverse current, $T_j = 190\ ^\circ\text{C}, V_R = V_{RRM}$	I_{RRM}	40	mA
Maximum average forward current, $f = 50\ \text{Hz}$, double side cooling, $T_C = 140\ ^\circ\text{C}$	$I_{F(AV)}$	250	A
RMS forward current, $f = 50\ \text{Hz}, T_C = 140\ ^\circ\text{C}$	I_{FRMS}	392	
Surge non-repetitive current, $T_j = 190\ ^\circ\text{C}, V_R = 0, t_p = 10\ \text{ms}$	I_{FSM}	6,4	kA
Safety factor	I^2t	$0,2 \cdot 10^6$	A^2s
Operation junction temperature range	T_j	-60...+ 190	$^\circ\text{C}$
Storage temperature range	T_{stg}	-60...+ 50	$^\circ\text{C}$

**D161-250, D161-250X**

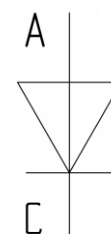
ELECTRICAL CHARACTERISTICS					
Parameter and conditions	Symbol	Values			Units
		min	typ.	max	
Maximum peak forward voltage, $T_j = 25\text{ °C}$, $I_F = 785\text{ A}$ D161-250 D161-250X	V_{FM}	-	-	1,35 1,45	V
On-state threshold voltage, $T_j = 190\text{ °C}$, $I_F = 390 - 1180\text{ A}$	$V_{F(TO)}$	-	-	0,90	
On-state slope resistance, $T_j = 190\text{ °C}$, $I_F = 390 - 1180\text{ A}$ D161-250 D161-250X	r_T	-	-	0,64 0,765	mΩ
Recovery charge, $T_j = 190\text{ °C}$, $I_F = 250\text{ A}$, $di_F/dt = -5\text{ A}/\mu\text{s}$, $V_R \geq 100\text{ V}$	Q_{rr}	-	-	900	μAs
Recovery current, $T_j = 190\text{ °C}$, $I_F = 250\text{ A}$, $di_F/dt = -5\text{ A}/\mu\text{s}$, $V_R \geq 100\text{ V}$	I_{rr}	-	-	82	A
THERMAL PARAMETERS					
Thermal resistance junction to case D161-250 D161-250X	$R_{th(j-c)}$	-	-	0,15 0,14	°C/W
Thermal resistance case to heatsink	$R_{th(c-h)}$	-	-	0,05	
MECHANICAL PARAMETERS					
Weight	w	-	0,265	-	kg
Mounting torque	M_d	20	-	30	Nm
Maximum acceleration (at nominal mounting torque)	a	-	-	50	m/s ²
Cathode-anode distance on insulator surface	D_s	-	18,8	-	mm



D161-250, D161-250X



D161-250



D161-250X

C – Cathode, A – Anode

Device Outline Drawing
(dimensions in mm)



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