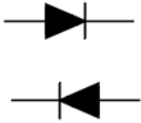



RECTIFIER DIODE D161-320, D161-320X

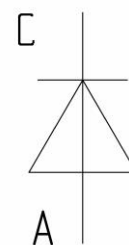
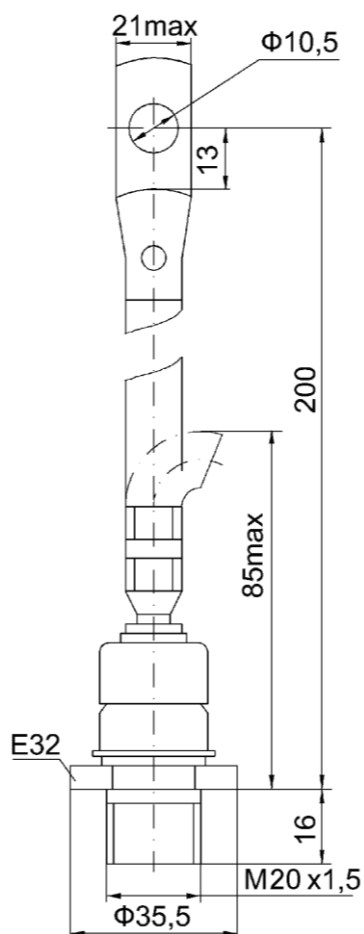
<ul style="list-style-type: none"> ◆ $V_{RRM} = \underline{300 - 1600 V}$ ◆ $I_{F(AV)} = \underline{320 A}$ ($T_C = 130\text{ }^\circ\text{C}$) ◆ $I_{FSM} = \underline{7,5 kA}$ ($T_j = 190\text{ }^\circ\text{C}$) 			
<ul style="list-style-type: none"> ◆ Hermetic metal cases with ceramic insulators ◆ Pressure contact design ◆ Threaded studs of ISO ◆ Low dispersion Q_{tr} 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, $T_j = -60 \dots + 190\text{ }^\circ\text{C}$	V_{RRM}	300-1600	V
Non- repetitive peak reverse voltage, $T_j = -60 \dots + 190\text{ }^\circ\text{C}$	V_{RSM}	400-1700	V
Repetitive peak reverse current, $T_j = 190\text{ }^\circ\text{C}$, $V_R = V_{RRM}$	I_{RRM}	40	mA
Maximum average forward current, $f = 50\text{ Hz}$, double side cooling, $T_C = 130\text{ }^\circ\text{C}$	$I_{F(AV)}$	320	A
RMS forward current, $f = 50\text{ Hz}$, $T_C = 130\text{ }^\circ\text{C}$	I_{FRMS}	500	A
Surge non-repetitive current, $T_j = 190\text{ }^\circ\text{C}$, $V_R = 0$, $t_p = 10\text{ ms}$	I_{FSM}	7,5	kA
Safety factor	I^2t	$0,28 \cdot 10^6$	A^2s
Operation junction temperature range	T_j	-60...+ 190	$^\circ\text{C}$
Storage temperature range	T_{stg}	-60...+ 50	$^\circ\text{C}$

**D161-320, D161-320X**

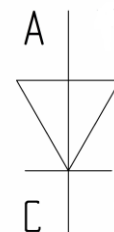
ELECTRICAL CHARACTERISTICS					
Parameter and conditions	Symbol	Values			Units
		min	typ.	max	
Maximum peak forward voltage, $T_j = 25\text{ °C}$, $I_F = 1004\text{ A}$ D161-320 D161-320X	V_{FM}	-	-	1,35 1,50	V
On-state threshold voltage, $T_j = 190\text{ °C}$, $I_F = 500 - 1500\text{ A}$	$V_{F(TO)}$	-	-	0,90	
On-state slope resistance, $T_j = 190\text{ °C}$, $I_F = 500 - 1500\text{ A}$ D161-320 D161-320X	r_T	-	-	0,5 0,65	mΩ
Recovery charge, $T_j = 190\text{ °C}$, $I_F = 320\text{ A}$, $di_F/dt = -5\text{ A}/\mu\text{s}$, $V_R \geq 100\text{ V}$	Q_{rr}	-	-	1000	μAs
Recovery current, $T_j = 190\text{ °C}$, $I_F = 320\text{ A}$, $di_F/dt = -5\text{ A}/\mu\text{s}$, $V_R \geq 100\text{ V}$	I_{rr}	-	-	80	A
THERMAL PARAMETERS					
Thermal resistance junction to case D161-320 D161-320X	$R_{th(j-c)}$	-	-	0,15 0,13	°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



D161-320, D161-320X



D161-320



D161-320X

C – Cathode, A – Anode

Device Outline Drawing
(dimensions in mm)



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