



MK300.04NI

NOT INSULATED FAST RECOVERY DIODE MODULE

Output Current **300 A**

Blocking Voltage **400 V**



V_{RRM} [V]	V_{RSM} [V]	V_{OUT} [V]	P/N
400	500	125	MK300.04NI

Features

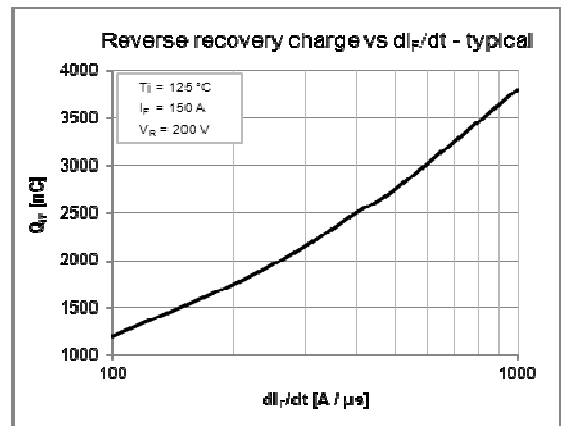
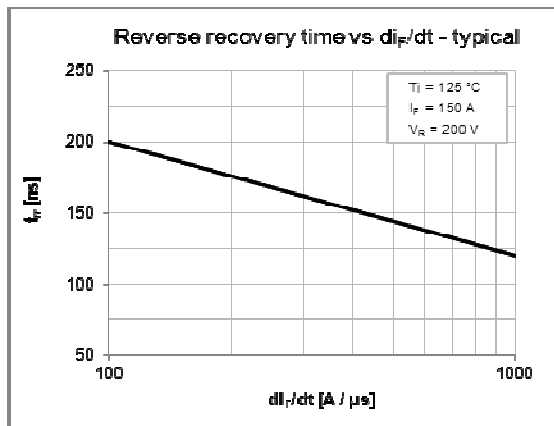
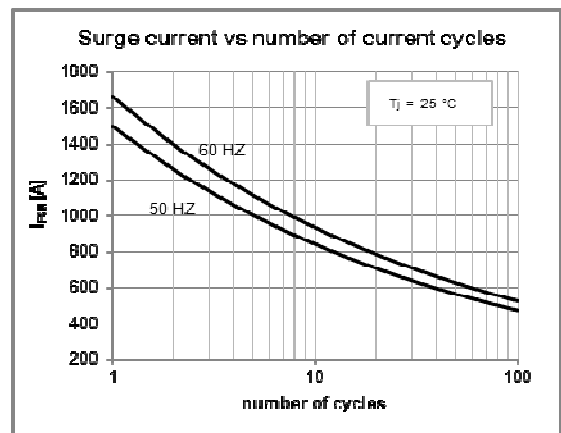
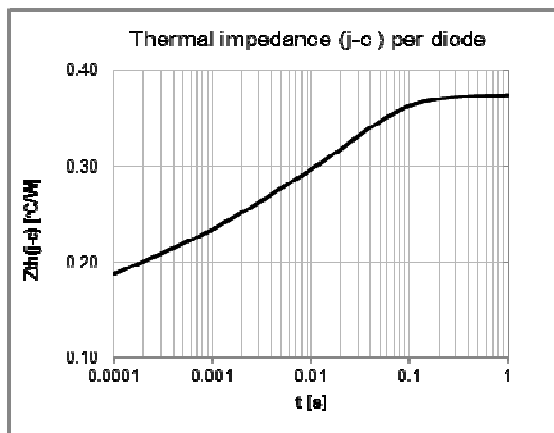
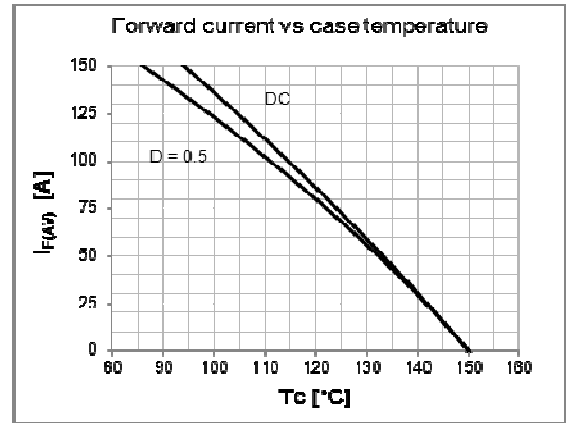
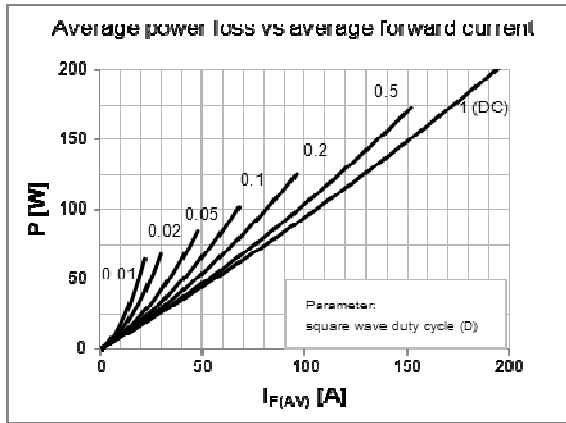
- Short recovery time
- Low switching losses
- Soft recovery behavior

Applications

- Antiparallel diode for high frequency switching devices
- Free-wheeling diode in converters or motor controllers
- Uninterruptible power supplies (UPS)
- Ultrasonic cleaners and welders

Diodes characteristics		Conditions	T_j [°C]	Value
$I_{F(AV)}$	Average forward current	$T_c = 86^\circ\text{C}$		150 A
I_{FRM}	Repetitive forward current, max	Square wave, 20 kHz		300 A
I_{RRM}	Max repetitive peak reverse current	$V = V_{RRM}$	150	4 mA
$V_{F(TO)}$	Threshold voltage		150	0,85 V
r_F	Forward slope resistance		150	1,0 m Ω
V_{FM}	Peak forward voltage, max	$I_F = 150\text{ A}$	150	1,17 V
I_{FSM}	Surge forward current	Half sine wave, 10 ms	25	1500 A
I^2t	Max I^2t for fusing		25	11250 A ² s
C_T	Junction capacitance, typ	$V = V_{RRM}$	25	100 pF
Q_{rr}	Reverse recovery charge, typ	$I_F = 150\text{ A}$	125	1750 nC
I_{rr}	Reverse recovery current, typ	$V_R = 200\text{ V}$		20 A
t_{rr}	Reverse recovery time, typ	$dI_F / dt = 200\text{ A} / \mu\text{s}$		175 ns
T_{jmax}	Operating junction temperature			-40 / 150 °C
$R_{th(j-c)}$	Thermal resistance (junction to case)			0,38 °C/W

Module characteristics		Conditions	Value
I_{OUT}	Output current (center tap connection)	$T_c = 86^\circ\text{C}$	300 A
$R_{th(c-h)}$	Thermal resistance (case to heatsink)	Mounting surface flat, smooth and greased	0,150 °C/W
T_{stg}	Max storage temperature		150 °C
W	Weight		115 g
M_1	Mounting torque, $\pm 15\%$		5,5 N·m
			48 lb·inch
M_2	Terminal connection torque, $\pm 15\%$		4,0 N·m
			35 lb·inch



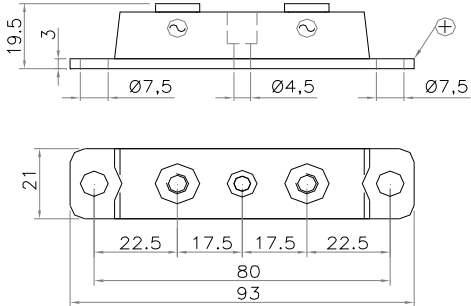


Fig.1 MK300.04NI-SS6-FIX6-HP-P80-TE

Code:MK4003000081

Special Version:Cu Base: 3x21x93

Cu Base: 3x21x92

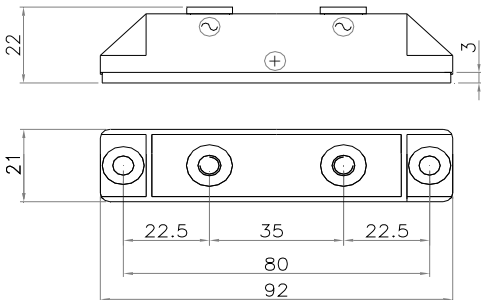


Fig.2 MK300.04NI-SS6-FIX5-HP-P80-TA

Code:MK4003000078

MK300.04NI-SS5-FIX5-HP-P80-TA

Code:MK4003000074

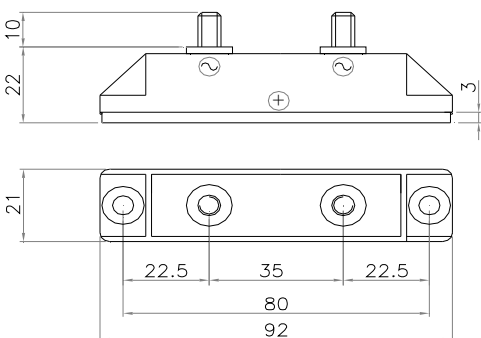


Fig.3 MK300.04NI-MM6x10-FIX5-HP-P80-TA

Code:MK4003000058

MK300.04NI-MM5x10-FIX5-HP-P80-TA

Code:MK4003000042

Power fix:

SS=Screw (M6 or M5)

MM=Bolt (M6 or M5)

Mounting fix:

FIX= Ø5,5

FIX= Ø7,5 (only Fig.1)

Profile:

HP=High Profile LP=Low Profile

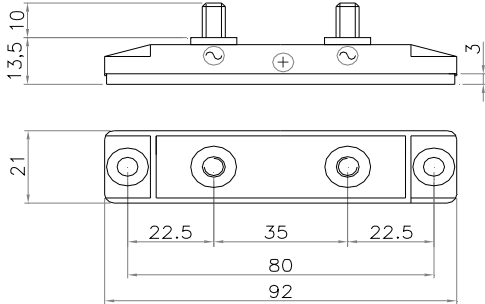


Fig.4 MK300.04NI-MM6x10-FIX5-LP-P80-TA
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 MK300.04NI-MM5x10-FIX5-LP-P80-TA
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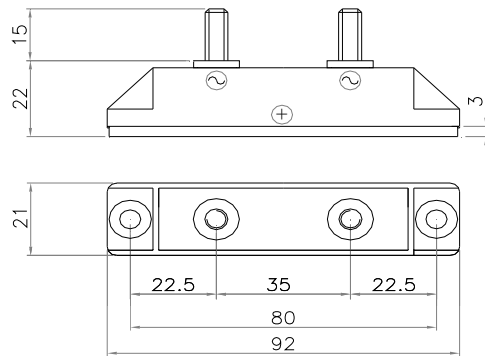


Fig.5 MK300.04NI-MM6x15-FIX5-HP-P80-TA
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 MK300.04NI-MM5x15-FIX5-HP-P80-TA
 Code:MK4003000050

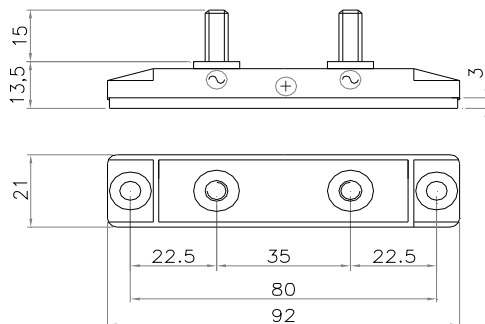


Fig.6 MK300.04NI-MM6x15-FIX5-LP-P80-TA
 Code:MK4003000070
 MK300.04NI-MM5x15-FIX5-LP-P80-TA
 Code:MK4003000054

Power fix:
 SS=Screw (M6 or M5)
 MM=Bolt (M6 or M5)

Mounting fix:
 FIX= Ø5,5

Profile:
 HP=High Profile LP=Low Profile

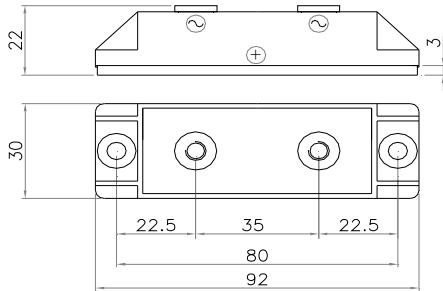


Fig.7 MK300.04NI-SS6-FIX5-HP-P80-TA
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 MK300.04NI-SS5-FIX5-HP-P80-TA
 Code:MK4003000076

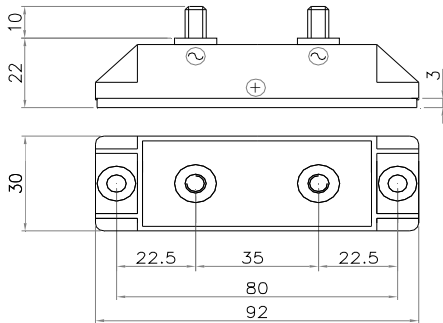


Fig.8 MK300.04NI-MM6x10-FIX5-HP-P80-TA
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 MK300.04NI-MM5x10-FIX5-HP-P80-TA
 Code:MK4003000044

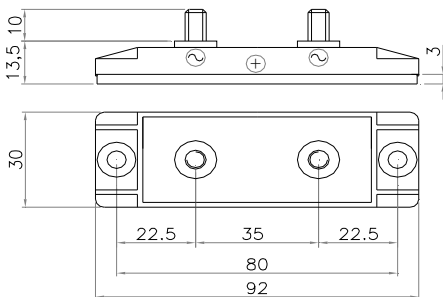


Fig.9 MK300.04NI-MM6x10-FIX5-LP-P80-TA
 Code:MK4003000064
 MK300.04NI-MM5x10-FIX5-LP-P80-TA
 Code:MK4003000048

Power fix:
 SS=Screw (M6 or M5)
 MM=Bolt (M6 or M5)

Mounting fix:
 FIX= Ø5,5

Profile:
 HP=High Profile LP=Low Profile

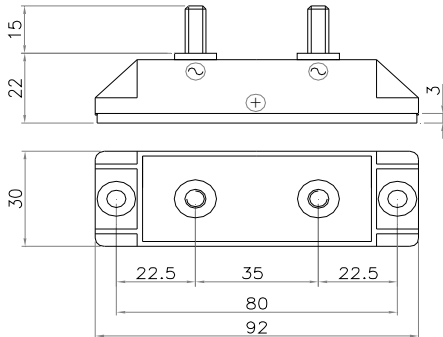


Fig.10 MK300.04NI-MM6x15-FIX5-HP-P80-TA
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 MK300.04NI-MM5x15-FIX5-HP-P80-TA
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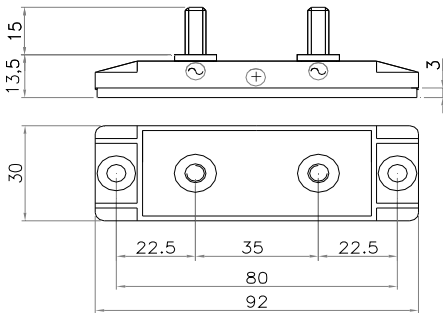


Fig.11 MK300.04NI-MM6x15-FIX5-LP-P80-TA
 Code:MK4003000072
 MK300.04NI-MM5x15-FIX5-LP-P80-TA
 Code:MK4003000056

Power fix:
 SS=Screw (M6 or M5)
 MM=Bolt (M6 or M5)

Mounting fix:
 FIX= Ø5,5

Profile:
 HP=High Profile LP=Low Profile

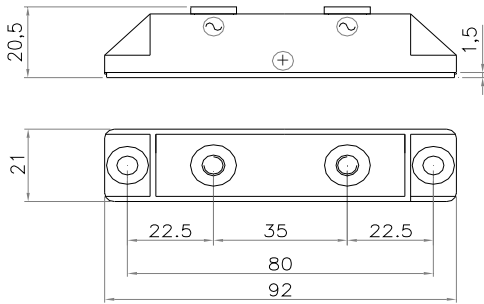


Fig.12 MK300.04NI-SS6-FIX5-HP-P80-TA

Code:MK4003000077

MK300.04NI-SS5-FIX5-HP-P80-TA

Code:MK4003000073

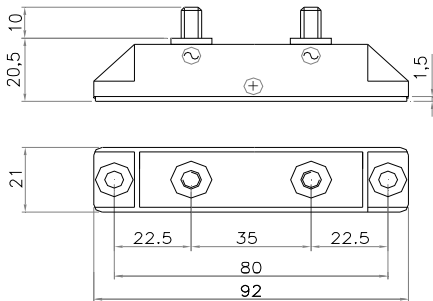


Fig.13 MK300.04NI-MM6x10-FIX5-HP-P80-TA

Code:MK4003000057

MK300.04NI-MM5x10-FIX5-HP-P80-TA

Code:MK4003000041

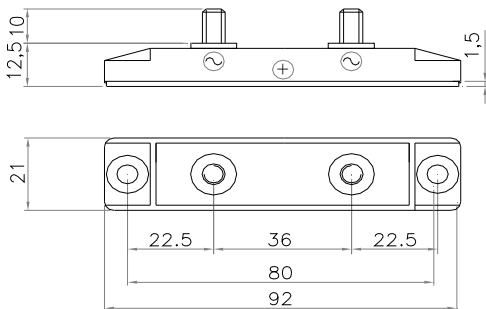


Fig.14 MK300.04NI-MM6x10-FIX5-LP-P80-TA

Code:MK4003000061

MK300.04NI-MM5x10-FIX5-LP-P80-TA

Code:MK4003000045

Power fix:
 SS=Screw (M6 or M5)
 MM=Bolt (M6 or M5)

Mounting fix:
 FIX= Ø5,5

Profile:
 HP=High Profile LP=Low Profile

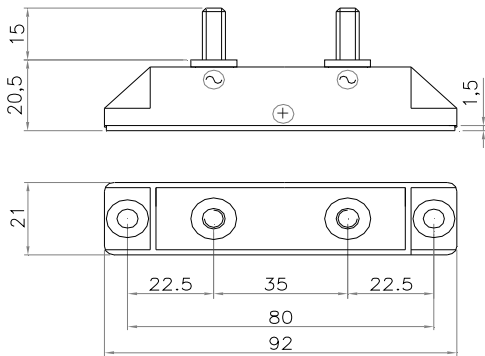


Fig.15 MK300.04NI-MM6x15-FIX5-HP-P80-TA
 Code:MK4003000065
 MK300.04NI-MM5x15-FIX5-HP-P80-TA
 Code:MK4003000049

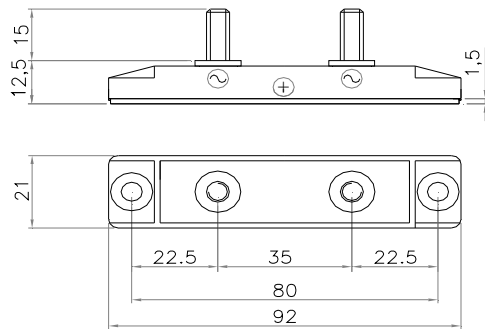


Fig.16 MK300.04NI-MM6x15-FIX5-LP-P80-TA
 Code:MK4003000069
 MK300.04NI-MM5x15-FIX5-LP-P80-TA
 Code:MK4003000053

Power fix:
 SS=Screw (M6 or M5)
 MM=Bolt (M6 or M5)

Mounting fix:
 FIX= Ø5,5

Profile:
 HP=High Profile LP=Low Profile

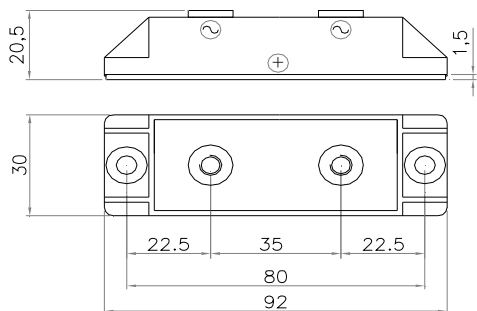


Fig.17 MK300.04NI-SS6-FIX5-HP-P80-TA

Code:MK4003000079

MK300.04NI-SS5-FIX5-HP-P80-TA

Code:MK4003000075

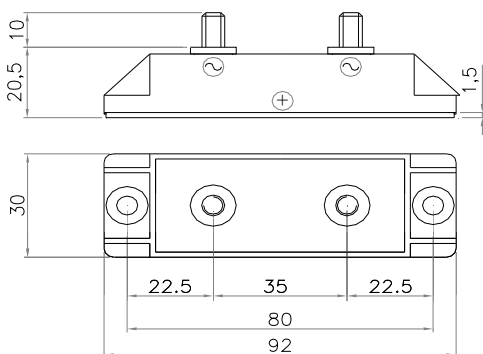


Fig.18 MK300.04NI-MM6x10-FIX5-HP-P80-TA

Code:MK4003000059

MK300.04NI-MM5x10-FIX5-HP-P80-TA

Code:MK4003000043

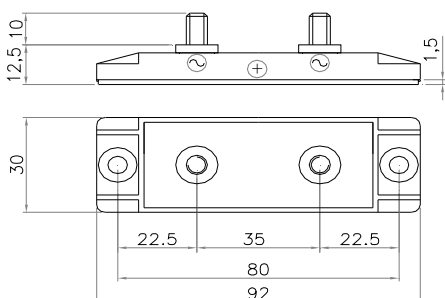


Fig.19 MK300.04NI-MM6x10-FIX5-LP-P80-TA

Code:MK4003000063

MK300.04NI-MM5x10-FIX5-LP-P80-TA

Code:MK4003000047

Power fix:
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 MM=Bolt (M6 or M5)

Mounting fix:
 FIX= Ø5,5

Profile:
 HP=High Profile LP=Low Profile

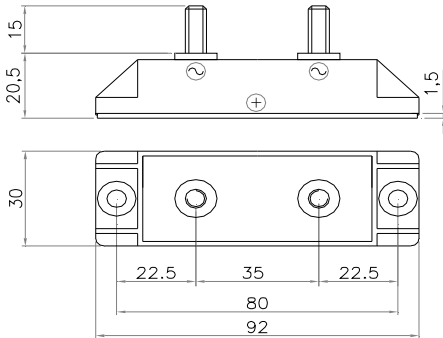


Fig.20 MK300.04NI-MM6x15-FIX5-HP-P80-TA
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 MK300.04NI-MM5x15-FIX5-HP-P80-TA
 Code:MK4003000051

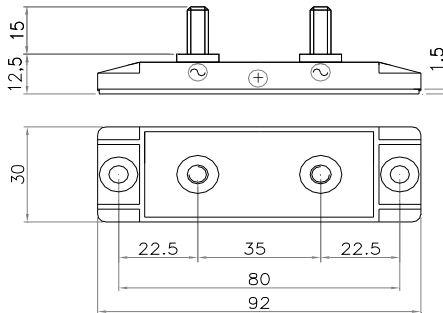


Fig.21 MK300.04NI-MM6x15-FIX5-LP-P80-TA
 Code:MK4003000071
 MK300.04NI-MM5x15-FIX5-LP-P80-TA
 Code:MK4003000055

Power fix:
 SS=Screw (M6 or M5)
 MM=Bolt (M6 or M5)

Mounting fix:
 FIX= Ø5,5

Profile:
 HP=High Profile LP=Low Profile