



MK300.02NI

NOT INSULATED FAST RECOVERY DIODE MODULE

Output Current **300 A**

Blocking Voltage **200 V**



V_{RRM} [V]	V_{RSM} [V]	V_{OUT} [V]	P/N
200	300	65	MK300.02 NI

Features

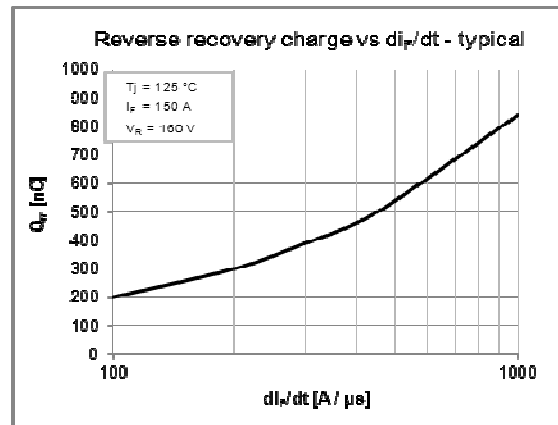
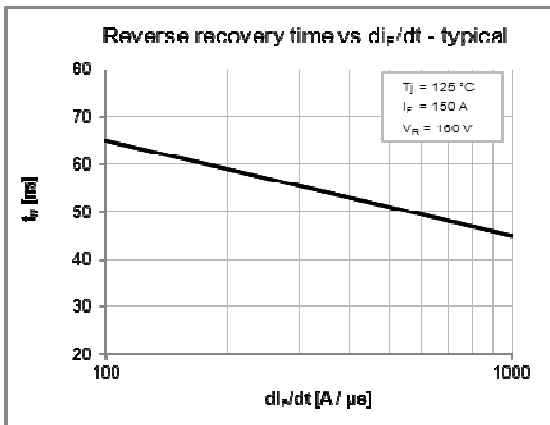
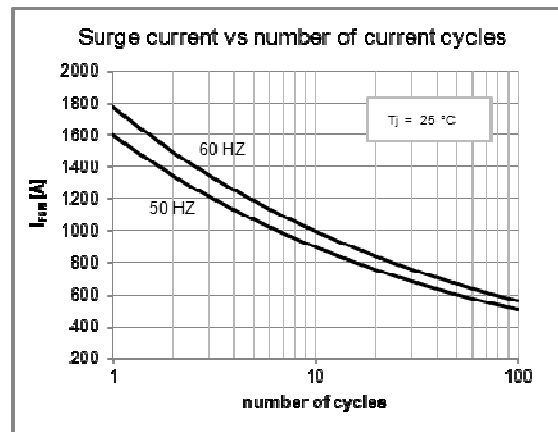
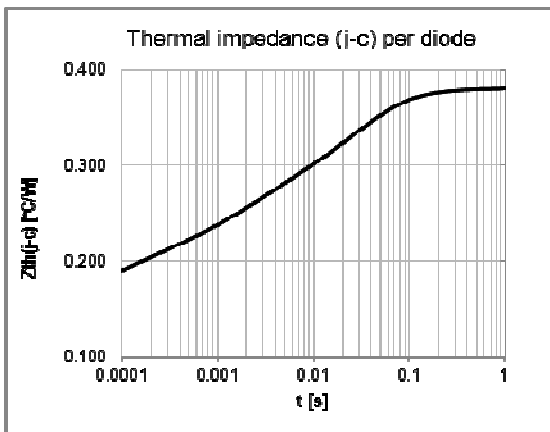
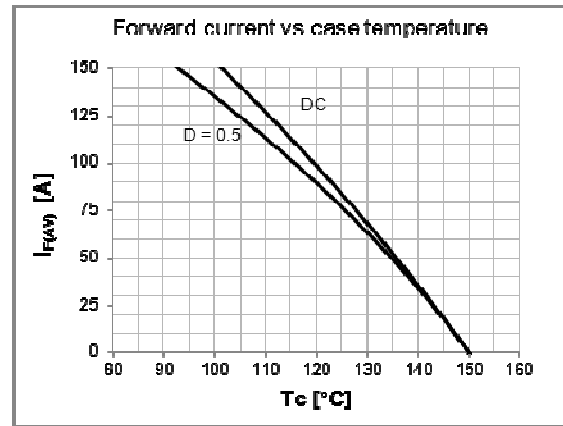
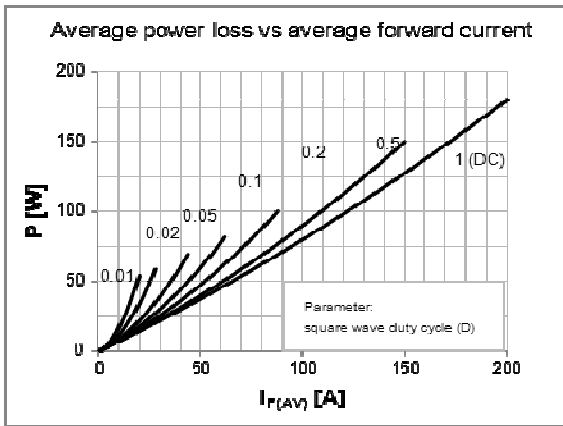
- Short recovery time
- Low switching losses
- Soft recovery behavior

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	$T_C = 94$ °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	2 mA
$V_{F(TO)}$	Threshold voltage		150	0,7 V
r_F	Forward slope resistance		150	1,0 mΩ
V_{FM}	Peak forward voltage, max	$I_F = 150$ A	150	1,0 V
I_{FSM}	Surge forward current	Half sine wave, 10 ms	25	1600 A
I^2t	Max I^2t for fusing		25	12800 A ² s
C_T	Junction capacitance, typ	$V = V_{RRM}$	25	180 pF
Q_{rr}	Reverse recovery charge, typ	$I_F = 150$ A	125	300 nC
I_{rr}	Reverse recovery current, typ	$V_R = 160$ V		9 A
t_{rr}	Reverse recovery time, typ	$dI_F / dt = 200$ A / μs		58 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)	$T_C = 93$ °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, ± 15 %		5,5 N·m
			48 lb·inch
M_2	Terminal connection torque, ± 15 %		4,0 N·m
			35 lb·inch



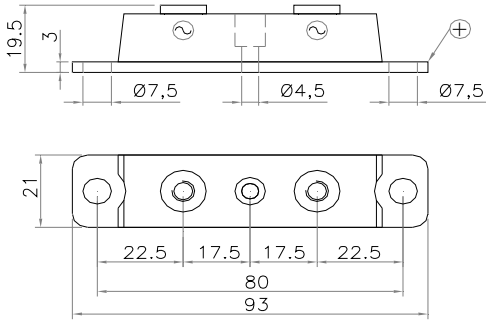


Fig.1 MK300.02NI-SS6-FIX6-HP-P80-TE
Code:MK40003000040
Special Version:Cu Base: 3x21x93

Cu Base: 3x21x92

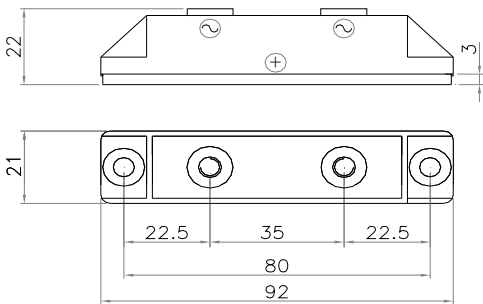


Fig.2 MK300.02NI-SS6-FIX5-HP-P80-TA
Code:MK40003000037
MK300.02NI-SS5-FIX5-HP-P80-TA
Code:MK40003000033

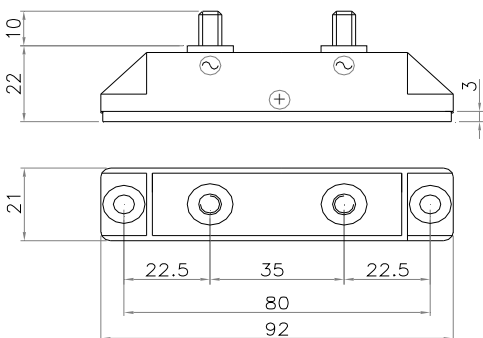


Fig.3 MK300.02NI-MM6x10-FIX5-HP-P80-TA
Code:MK40003000017
MK300.02NI-MM5x10-FIX5-HP-P80-TA
Code:MK40003000001

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

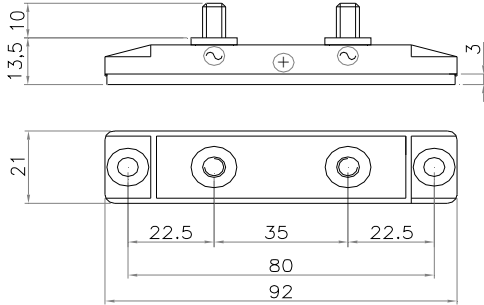


Fig.4 MK300.02NI-MM6x10-FIX5-LP-P80-TA
 Code:MK40003000021
 MK300.02NI-MM5x10-FIX5-LP-P80-TA
 Code:MK40003000005

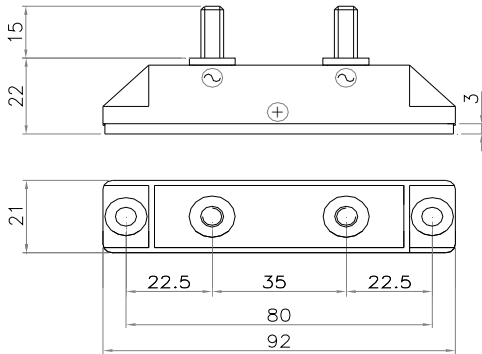


Fig.5 MK300.02NI-MM6x15-FIX5-HP-P80-TA
 Code:MK40003000025
 MK300.02NI-MM5x15-FIX5-HP-P80-TA
 Code:MK40003000009

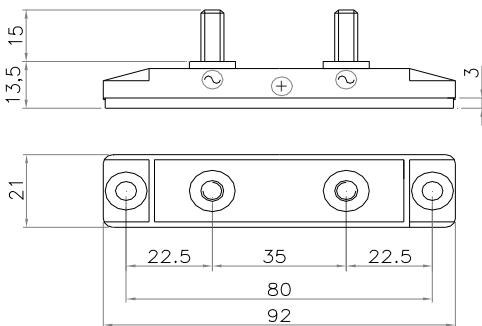


Fig.6 MK300.02NI-MM6x15-FIX5-LP-P80-TA
 Code:MK40003000029
 MK300.02NI-MM5x15-FIX5-LP-P80-TA
 Code:MK40003000013

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

Mounting fix:
 FIX= Ø5,5

Profile:
 HP=High Profile LP=Low Profile

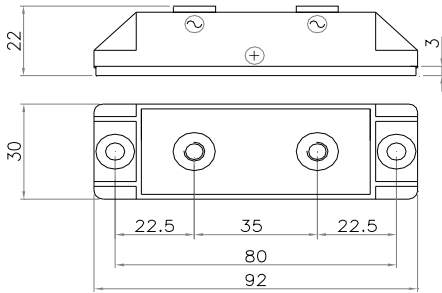


Fig.7 MK300.02NI-SS6-FIX5-HP-P80-TA
 Code:MK40003000039
 MK300.02NI-SS5-FIX5-HP-P80-TA
 Code:MK40003000035

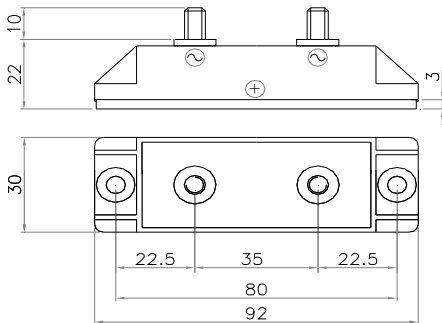


Fig.8 MK300.02NI-MM6x10-FIX5-HP-P80-TA
 Code:MK40003000019
 MK300.02NI-MM5x10-FIX5-HP-P80-TA
 Code:MK40003000003

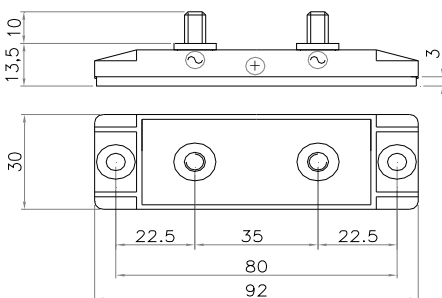


Fig.9 MK300.02NI-MM6x10-FIX5-LP-P80-TA
 Code:MK40003000023
 MK300.02NI-MM5x10-FIX5-LP-P80-TA
 Code:MK40003000007

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

Mounting fix:
 FIX= Ø5,5

Profile:
 HP=High Profile LP=Low Profile

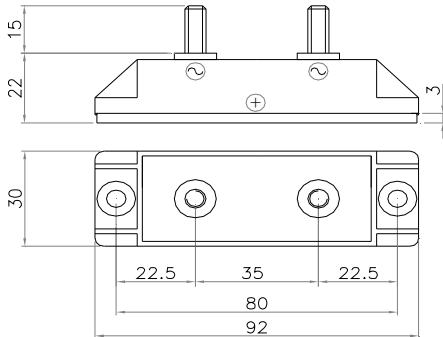


Fig.10 MK300.02NI-MM6x15-FIX5-HP-P80-TA
 Code:MK40003000027
 MK300.02NI-MM5x15-FIX5-HP-P80-TA
 Code:MK40003000011

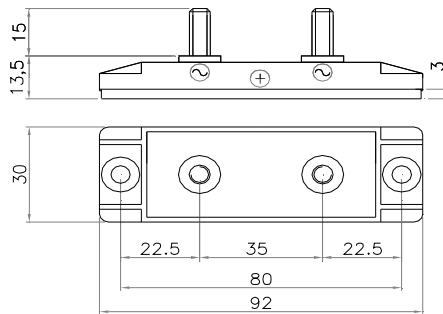


Fig.11 MK300.02NI-MM6x15-FIX5-LP-P80-TA
 Code:MK40003000031
 MK300.02NI-MM5x15-FIX5-LP-P80-TA
 Code:MK40003000015

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

Mounting fix:
 FIX= Ø5,5

Profile:
 HP=High Profile LP=Low Profile

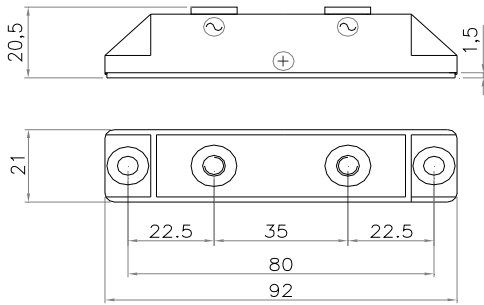


Fig.12 MK300.02NI-SS6-FIX5-HP-P80-TA

Code:MK40003000036

MK300.02NI-SS5-FIX5-HP-P80-TA

Code:MK40003000032

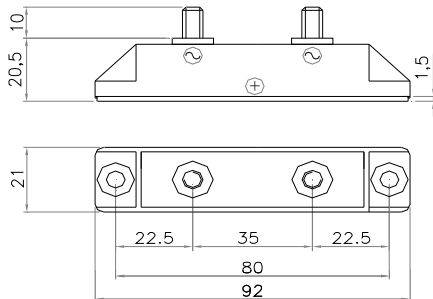


Fig.13 MK300.02NI-MM6x10-FIX5-HP-P80-TA

Code:MK40003000016

MK300.02NI-MM5x10-FIX5-HP-P80-TA

Code:MK40003000000

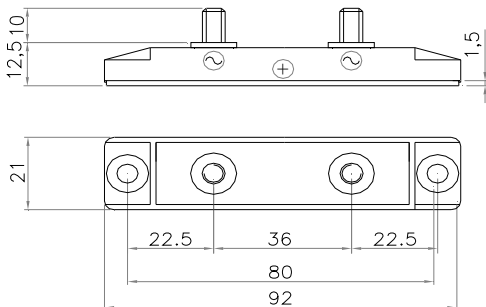


Fig.14 MK300.02NI-MM6x10-FIX5-LP-P80-TA

Code:MK40003000020

MK300.02NI-MM5x10-FIX5-LP-P80-TA

Code:MK40003000004

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

Mounting fix:
 FIX= Ø5,5

Profile:
 HP=High Profile LP=Low Profile

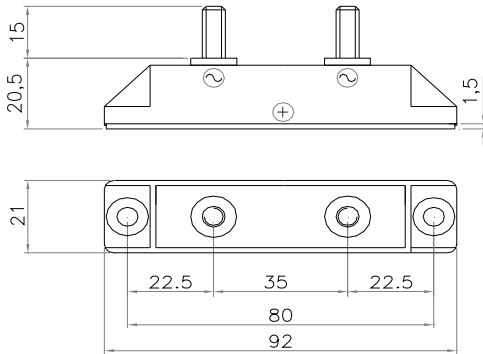


Fig.15 MK300.02NI-MM6x15-FIX5-HP-P80-TA
 Code:MK40003000024
 MK300.02NI-MM5x15-FIX5-HP-P80-TA
 Code:MK40003000008

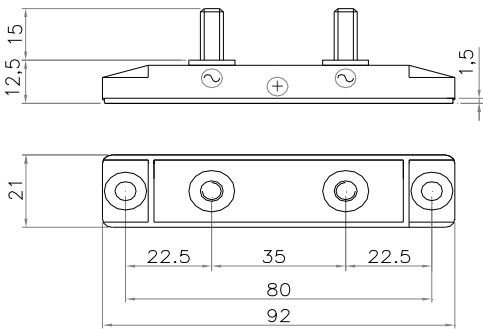


Fig.16 MK300.02NI-MM6x15-FIX5-LP-P80-TA
 Code:MK40003000028
 MK300.02NI-MM5x15-FIX5-LP-P80-TA
 Code:MK40003000012

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

Mounting fix:
 FIX= Ø5,5

Profile:
 HP=High Profile LP=Low Profile

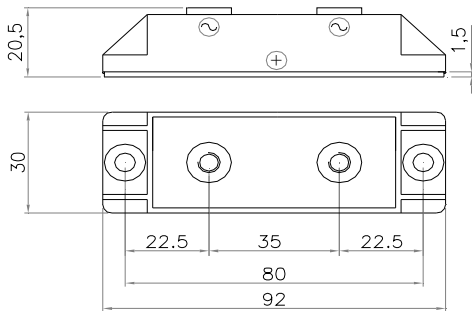


Fig.17 MK300.02NI-SS6-FIX5-HP-P80-TA
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 MK300.02NI-SS5-FIX5-HP-P80-TA
 Code:MK40003000034

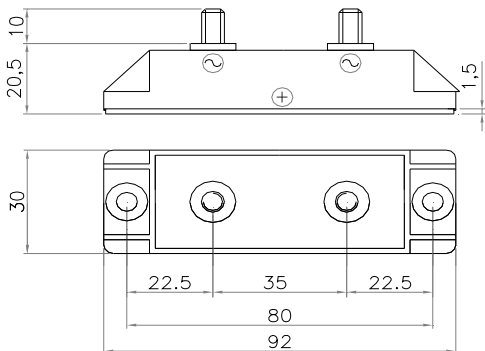


Fig.18 MK300.02NI-MM6x10-FIX5-HP-P80-TA
 Code:MK40003000018
 MK300.02NI-MM5x10-FIX5-HP-P80-TA
 Code:MK4000300002

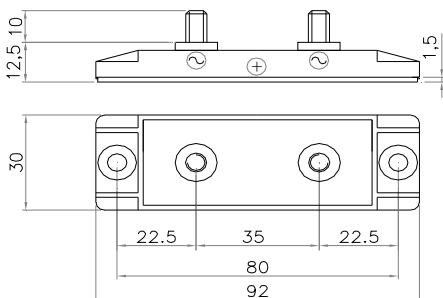


Fig.19 MK300.02NI-MM6x10-FIX5-LP-P80-TA
 Code:MK40003000022
 MK300.02NI-MM5x10-FIX5-LP-P80-TA
 Code:MK40003000006

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

Mounting fix:
 FIX= Ø5,5

Profile:
 HP=High Profile LP=Low Profile

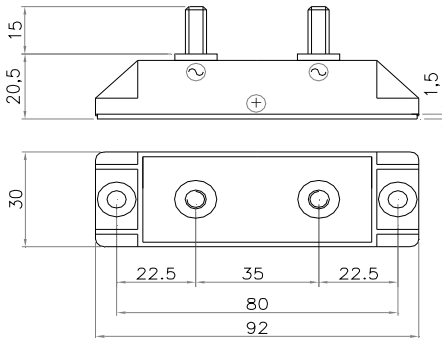


Fig.20 MK300.02NI-MM6x15-FIX5-HP-P80-TA
 Code:MK40003000026
 MK300.02NI-MM5x15-FIX5-HP-P80-TA
 Code:MK40003000010

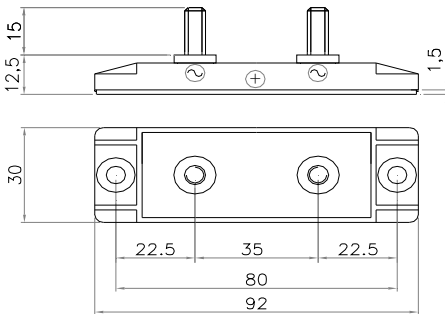


Fig.21 MK300.02NI-MM6x15-FIX5-LP-P80-TA
 Code:MK40003000030
 MK300.02NI-MM5x15-FIX5-LP-P80-TA
 Code:MK40003000014

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

Mounting fix:
 FIX= Ø5,5

Profile:
 HP=High Profile LP=Low Profile