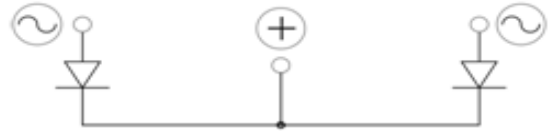


MKK300.04NI

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	MKK300.04NI

Features

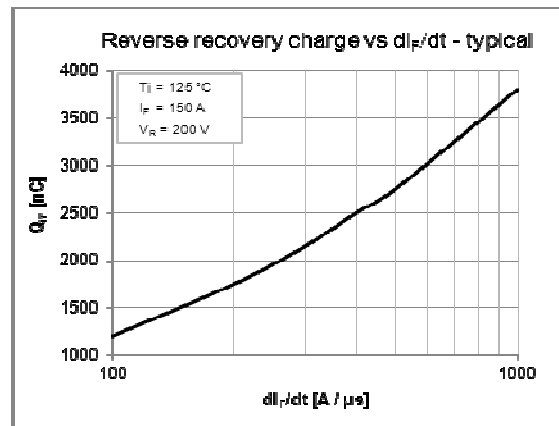
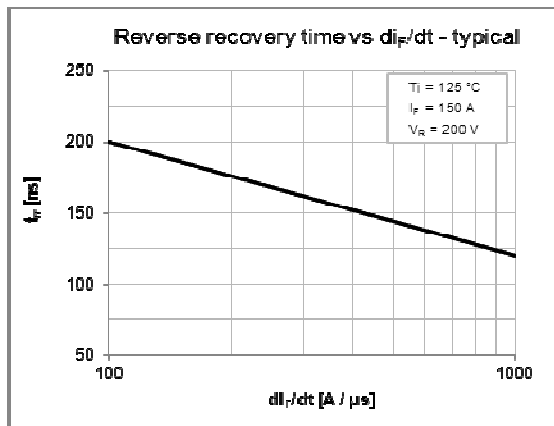
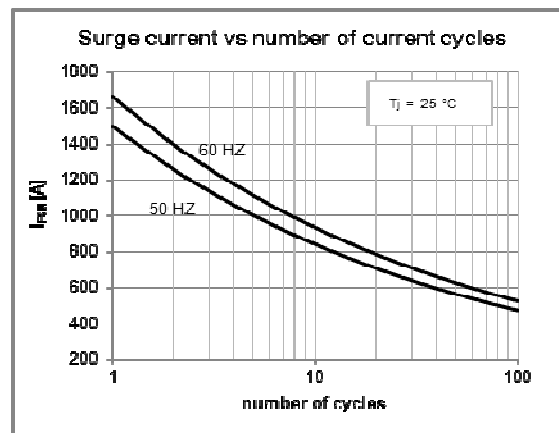
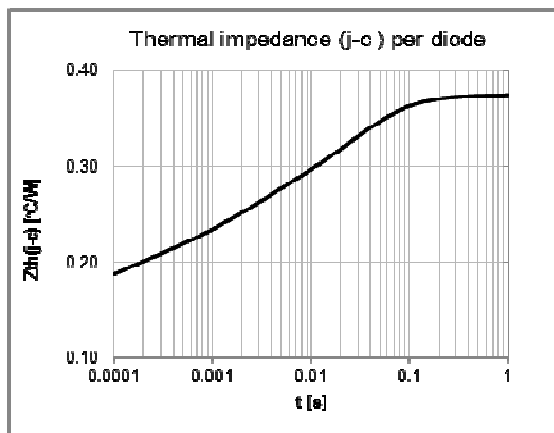
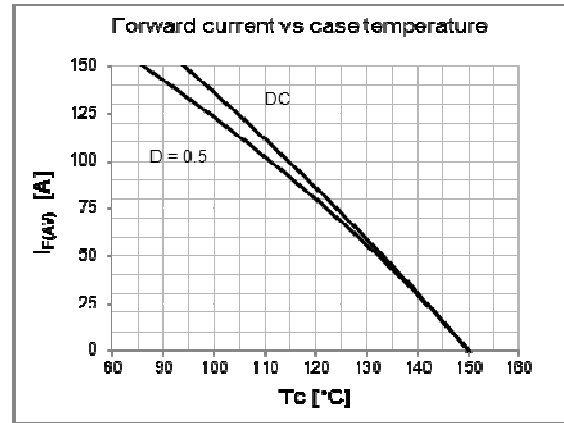
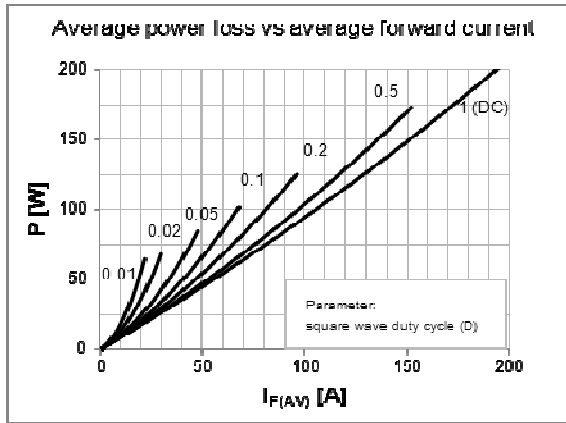
- Short recovery time
- Low switching losses
- Soft recovery behavior

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	$T_c = 86\text{ °C}$		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 mΩ
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)	$T_c = 86\text{ °C}$	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, ± 15 %		5,5 N·m
			48 lb·inch
M_2	Terminal connection torque, ± 15 %		4,0 N·m
			35 lb·inch



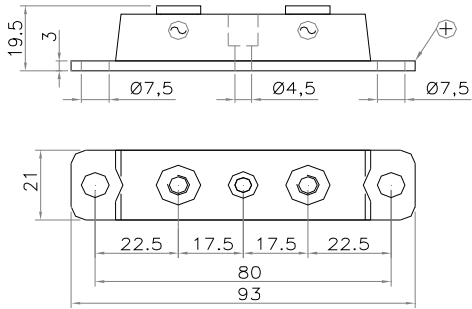


Fig.1 MKK300.04NI-SS6-FIX6-HP-P80-TE
Code:940003000081
Special Version:Cu Base: 3x21x93

Cu Base: 3x21x92

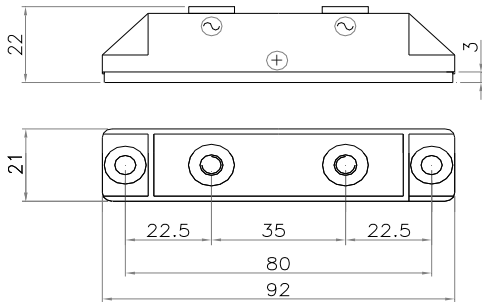


Fig.2 MKK300.04NI-SS6-FIX5-HP-P80-TA
Code:940003000078
MKK300.04NI-SS5-FIX5-HP-P80-TA
Code:940003000074

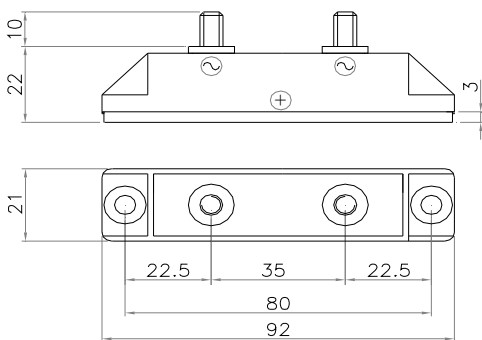


Fig.3 MKK300.04NI-MM6x10-FIX5-HP-P80-TA
Code:940003000058
MKK300.04NI-MM5x10-FIX5-HP-P80-TA
Code:940003000042

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

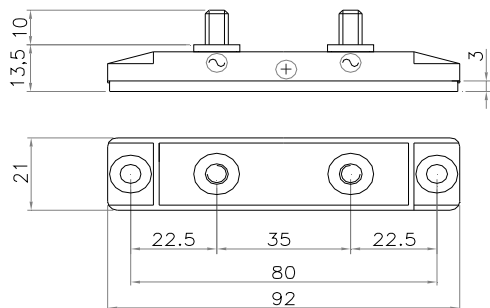


Fig.4 MKK300.04NI-MM6x10-FIX5-LP-P80-TA
 Code:940003000062
 MKK300.04NI-MM5x10-FIX5-LP-P80-TA
 Code:940003000046

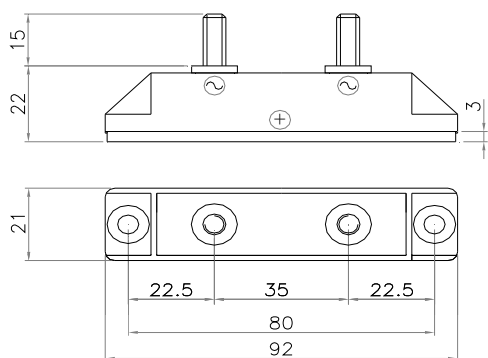


Fig.5 MKK300.04NI-MM6x15-FIX5-HP-P80-TA
 Code:940003000066
 MKK300.04NI-MM5x15-FIX5-HP-P80-TA
 Code:940003000050

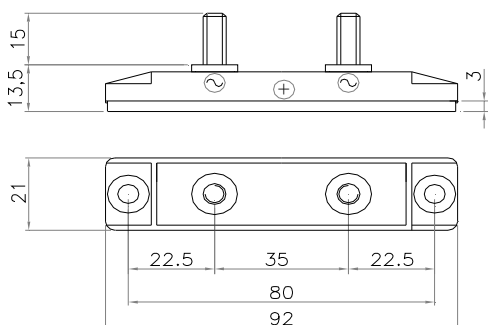


Fig.6 MKK300.04NI-MM6x15-FIX5-LP-P80-TA
 Code:940003000070
 MKK300.04NI-MM5x15-FIX5-LP-P80-TA
 Code:940003000054

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

Mounting fix:
 FIX= Ø5,5

Profile:
 HP=High Profile LP=Low Profile

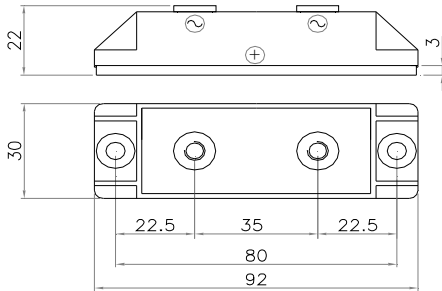


Fig.7 MKK300.04NI-SS6-FIX5-HP-P80-TA
 Code:940003000080
 MKK300.04NI-SS5-FIX5-HP-P80-TA
 Code:940003000076

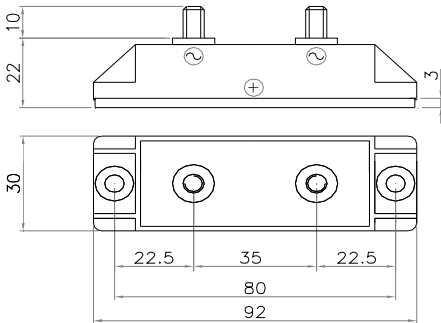


Fig.8 MKK300.04NI-MM6x10-FIX5-HP-P80-TA
 Code:940003000060
 MKK300.04NI-MM5x10-FIX5-HP-P80-TA
 Code:940003000044

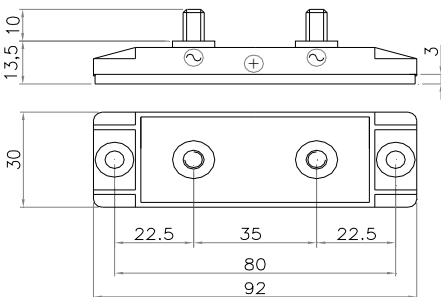


Fig.9 MKK300.04NI-MM6x10-FIX5-LP-P80-TA
 Code:940003000064
 MKK300.04NI-MM5x10-FIX5-LP-P80-TA
 Code:940003000048

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

Mounting fix:
 FIX= Ø5,5

Profile:
 HP=High Profile LP=Low Profile

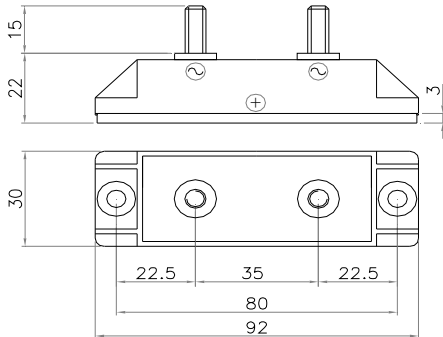


Fig.10 MKK300.04NI-MM6x15-FIX5-HP-P80-TA
 Code:940003000068
 MKK300.04NI-MM5x15-FIX5-HP-P80-TA
 Code:940003000052

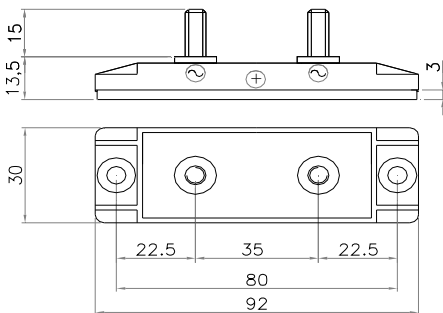


Fig.11 MKK300.04NI-MM6x15-FIX5-LP-P80-TA
 Code:940003000072
 MKK300.04NI-MM5x15-FIX5-LP-P80-TA
 Code:940003000056

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

Mounting fix:
 FIX= Ø5,5

Profile:
 HP=High Profile LP=Low Profile

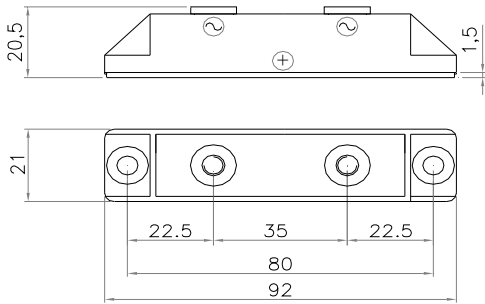


Fig.12 MKK300.04NI-SS6-FIX5-HP-P80-TA

Code:940003000077

MKK300.04NI-SS5-FIX5-HP-P80-TA

Code:940003000073

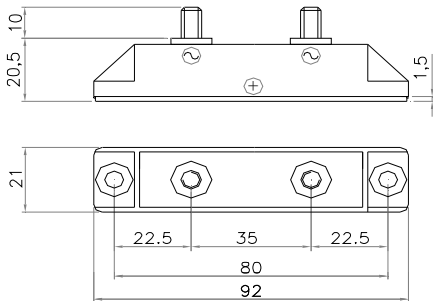


Fig.13 MKK300.04NI-MM6x10-FIX5-HP-P80-TA

Code:940003000057

MKK300.04NI-MM5x10-FIX5-HP-P80-TA

Code:940003000041

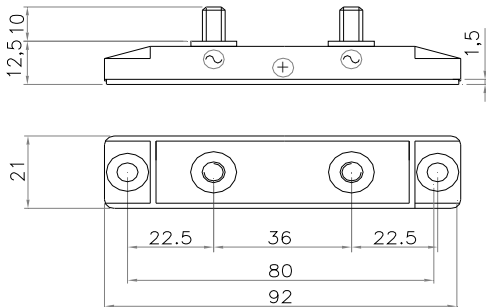


Fig.14 MKK300.04NI-MM6x10-FIX5-LP-P80-TA

Code:940003000061

MKK300.04NI-MM5x10-FIX5-LP-P80-TA

Code:940003000045

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

Mounting fix:
 FIX= Ø5,5

Profile:
 HP=High Profile LP=Low Profile

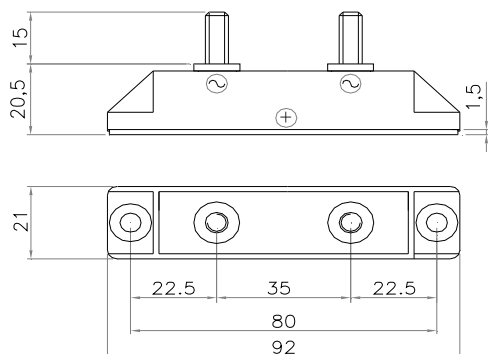


Fig.15 MKK300.04NI-MM6x15-FIX5-HP-P80-TA
 Code:940003000065
 MKK300.04NI-MM5x15-FIX5-HP-P80-TA
 Code:940003000049

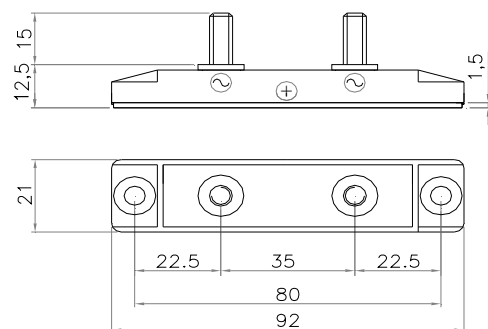


Fig.16 MKK300.04NI-MM6x15-FIX5-LP-P80-TA
 Code:940003000069
 MKK300.04NI-MM5x15-FIX5-LP-P80-TA
 Code:940003000053

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

Mounting fix:
 FIX= Ø5,5

Profile:
 HP=High Profile LP=Low Profile

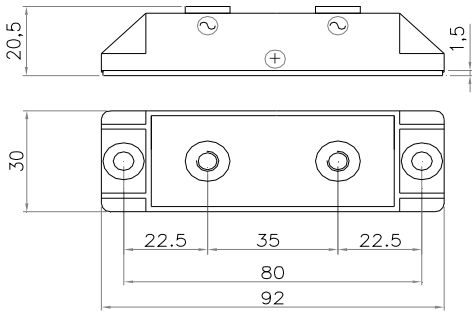


Fig.17 MKK300.04NI-SS6-FIX5-HP-P80-TA
 Code:940003000079
 MKK300.04NI-SS5-FIX5-HP-P80-TA
 Code:940003000075

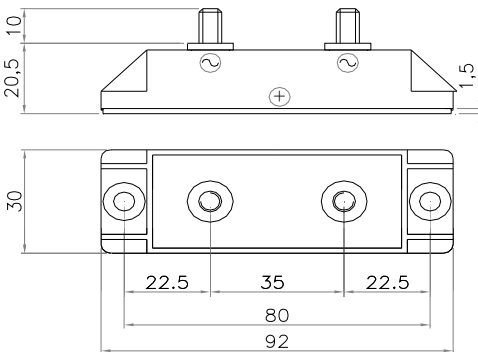


Fig.18 MKK300.04NI-MM6x10-FIX5-HP-P80-TA
 Code:940003000059
 MKK300.04NI-MM5x10-FIX5-HP-P80-TA
 Code:940003000043

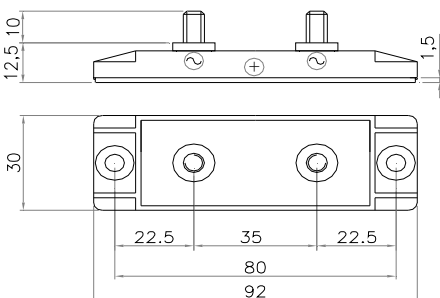


Fig.19 MKK300.04NI-MM6x10-FIX5-LP-P80-TA
 Code:940003000063
 MKK300.04NI-MM5x10-FIX5-LP-P80-TA
 Code:940003000047

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

Mounting fix:
 FIX= Ø5,5

Profile:
 HP=High Profile LP=Low Profile

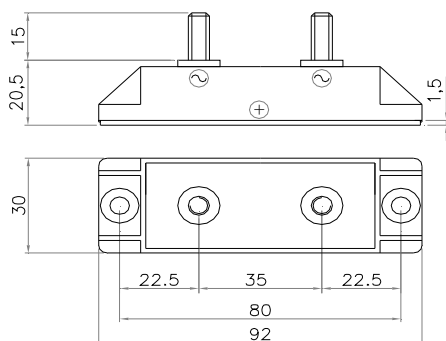


Fig.20 MKK300.04NI-MM6x15-FIX5-HP-P80-TA
 Code:940003000067
 MKK300.04NI-MM5x15-FIX5-HP-P80-TA
 Code:940003000051

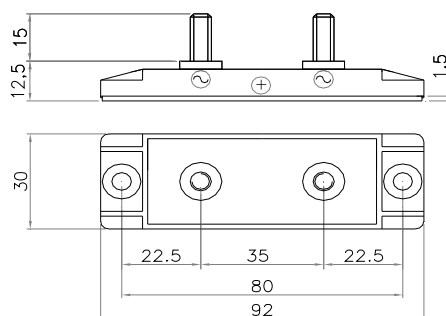


Fig.21 MKK300.04NI-MM6x15-FIX5-LP-P80-TA
 Code:940003000071
 MKK300.04NI-MM5x15-FIX5-LP-P80-TA
 Code:940003000055

Power fix:

SS=Screw (M6 or M5)
 MM=Bolt (M6 or M5)

Mounting fix:

FIX= Ø5,5

Profile:

HP=High Profile LP=Low Profile