



AdvancedMC™ connector for AdvancedTCA®



General information

Design	PICMG AMC.0, Rev. 2.0
No. of contacts	170
Contact spacing	0,75 mm
Test voltage	80 V r.m.s.
Contact resistance	ground contacts < 60 mOhm other contacts < 90 mOhm
Insulation resistance	> 10 ⁹ Ohm
Nominal differential impedance	100 Ohm ± 10%
Working current as defined in AMC.0	min. 1,52 A @ 70°C, max 30°C temperature rise
Temperature range	-55°C ... +105°C
Termination technology	press-in
Clearance & creepage distance	> 0,1 mm
Insertion force	< 100 N (typically 60-95 N depending on the AdvancedMC card)
Withdrawal force	< 65 N (typically 30-45 N depending on the AdvancedMC card)
Mating cycles	200
UL file	E102079
RoHS - compliant	Yes
Leadfree	Yes

Insulator material

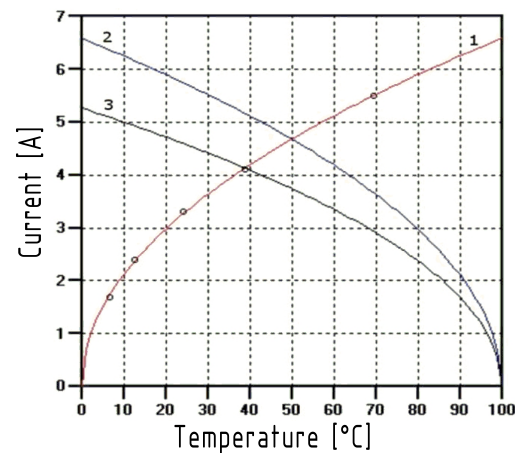
Material	LCP (liquid crystalline polymer, glass fiber reinforcement 30%)
Color	black
UL classification	UL 94-V0
Material group acc. IEC 60664-1	IIIa (175 ≤ CTI < 400)

Contact material

Contact material	Copper alloy
Plating press-in zone	Ni
Plating contact zone	Au over Pd over Ni

Derating diagram acc. to IEC 60512-5 (Current carrying capacity)

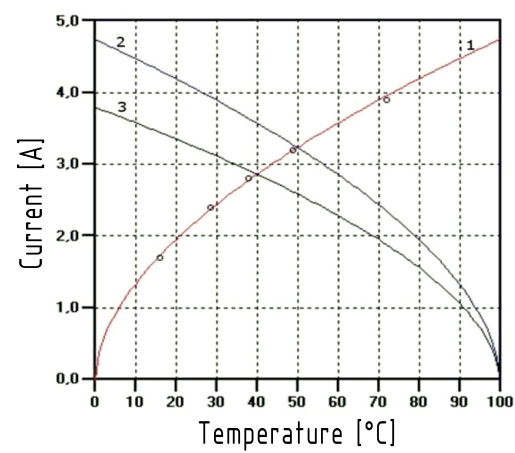
Power conductor, requirement min. 1,52 A @ 70° C



Curve 1 shows raise in temperature

Curve 2 shows nominal derating

Diff. pair conductor, requirement min. 0,1 A @ 70° C

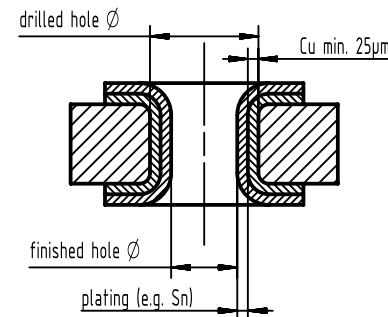


Curve 3 shows reduced values as per IEC512

Recommended configuration of plated through holes for press-in termination

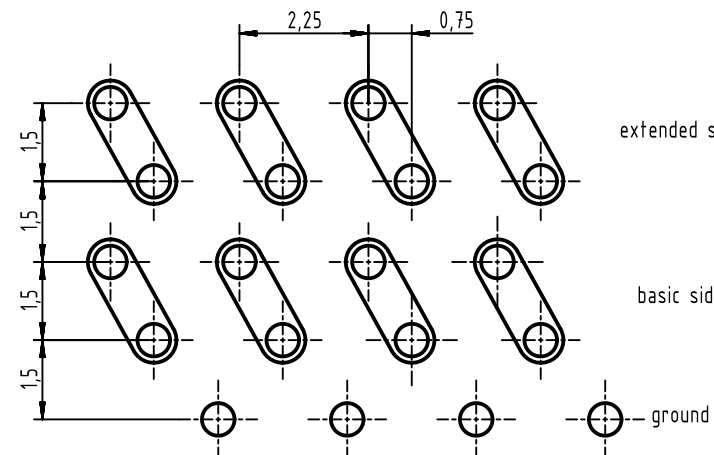
The press-in zone of the AdvancedMC™ connector is tested according to Telcordia/Bellcore GR 1217CORE Part7. It is approved to be used with a plated through hole according IEC 60352-5 with a diameter of 0.55±0.05 mm (drilled hole 0.64±0.01 mm).

Based on our experiences regarding the production process of the PCB manufacturer we recommend a plated through hole configuration like shown in the table on the right side. To achieve the recommended plated through hole diameter, it is important to specify especially the drilled hole diameter of 0.64±0.01 mm to your PCB supplier. For drillings use e.g. drill bit # 72 (0.025" ≈ 0.64 mm).



Tin plated PCB (HAL)	Drilled hole Ø	0,64 ± 0,01 mm
	finished hole Ø	0,53 - 0,60 mm
Chemical tin plated PCB	Drilled hole Ø	0,64 ± 0,01 mm
	finished hole Ø	0,56 - 0,60 mm
Gold /Nickel plated PCB	Drilled hole Ø	0,64 ± 0,01 mm
	Ni	3 - 7 µm
	Au	0,05 - 0,12 µm
Silver plated PCB	Drilled hole Ø	0,64 ± 0,01 mm
	Ag	0,1 - 0,3 µm
Copper plated PCB (OSP)	Drilled hole Ø	0,64 ± 0,01 mm
	finished hole Ø	0,56 - 0,60 mm
All surfaces	Pad size Ø	min. 0,95 mm

Pin grid at termination side



Available on request:

- PCB library (PADS/Dx-Designer)
- SPICE models
- S-Parameter

Differential propagation delay	Basic side	125 ps
	Extended side	145 ps
Differential skew	Between basic and extended side	20 ps
	Within basic and extended side	± 2 ps

Crosstalk

Max. crosstalk @ 25 ps risetime	Bottom route
Adjacent	0.55%
Basic-to-extended (diagonal)	0.68%
Basic-to-extended (opposite)	0.39%
Multiline (five multi-aggressor differential pairs)	2.74% max.



All Dimensions in mm
Original Size DIN A3

Scale
1:1

Free size tol.

Ref.

Sub. DS 16 04 220 01 01 Mod. EC02426 2011-04-29



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Created by
THIELEMAN

Inspected by
TADJE

Standardisation
KOHLE

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State
Final Release

Title
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HARTING Electronics GmbH
D-32339 Espelkamp

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Page
1/1