

PIN GRID ARRAY SOCKETS

MPAS, MVAS, MHAS, MSAS

Mates with:
MPAT, MVAT, MHAT, MSAT

SPECIFICATIONS

For complete specifications see www.samtec.com?MPAS or www.samtec.com?MVAS

MPAS, MVAS
Insulator Material:
Black G.F. Polyester



Contact: BeCu
Shell: Brass except Style K Phosphor Bronze
Operating Temp Range:
-55°C to +105°C with Tin
-55°C to +125°C with Gold
Plating: Au over 50µ" (1,27µm)
Ni or Sn over 100µ" (2,58µm)
Cu or 50µ" (1,27µm) Ni
Current Rating: 1A
Contact Resistance:
10mΩ max

Lead Size Range:
.015" (0,38mm) to
.022" (0,56mm) DIA except
Style ZL = .015" (0,38mm) to
.020" (0,51mm) DIA;
ZM = .016" (0,41mm) to
.021" (0,53mm) DIA;
ZN = .016" (0,41mm) to
.020" (0,51mm) DIA

Insertion Force:
(Single contact only) Style ZU = 1.5oz (0,42N) max, all others = 2.5 oz (0,69N) avg, 5.5 oz (1,53N) max, except Styles J & K = 9 oz (2,50N) avg, 16 oz (4,45N) max

Withdrawal Force:
(Single contact only) Style ZU = 1.5oz (0,42N) max, all others = 2.0 oz (0,56N) avg, 0.35 oz (0,97N) min, except Styles J & K = 2.5 oz (0,69N) avg, 1.5 oz (0,42N) min

Lead-Free Solderable:

Wave, only
RoHS Compliant:

No

SPECIFICATIONS

For complete specifications see www.samtec.com?MHAS

MHAS

Same as MPAS except:
Insulator Material:
Black High Temp. Plastic



SPECIFICATIONS

For complete specifications see www.samtec.com?MSAS

MSAS

Same as MPAS except:
Insulator Material:
Black Liquid Crystal Polymer
Max Processing Temp:
230°C for 30 to 60 seconds



| BODY STYLE | PIN COUNT | LEAD STYLE | PLATING OPTION | PIN OUT CODE | OPTION |
|---|---|--|--|--|--------|
| <p>MPAS = Standard Polyester</p> <p>MVAS = Open Body Polyester</p> <p>MSAS = Hi-Temp LCP Open Body</p> | <p>— "XXX" — = Total Number of Filled Positions</p> | <p>GG = 30µ" (0,76µm) Gold Contact, 10µ" (0,25µm) Gold Shell</p> <p>GT = 30µ" (0,76µm) Gold Contact, Tin Shell</p> <p>TT = Tin Contact and Shell (Styles -ZS & ZW Only)</p> <p>ST = 10µ" (5,08µm) Gold Contact, Tin Shell (Style -ZS only)</p> | <p>GG = 30µ" (0,76µm) Gold Contact, 10µ" (0,25µm) Gold Shell</p> <p>GT = 30µ" (0,76µm) Gold Contact, Tin Shell</p> <p>TT = Tin Contact and Shell (Styles -ZS & ZW Only)</p> <p>ST = 10µ" (5,08µm) Gold Contact, Tin Shell (Style -ZS only)</p> | <p>-2 = (9,14).360 Wire-Wrap (-ZW Only)</p> <p>-3 = (6,60).260 Wire-Wrap (-ZW Only)</p> <p>-L = Locking Socket (-ZS Only)</p> <p>Requires GT Plating Option</p> | |

ALSO AVAILABLE

RoHS compliant options. Call Samtec.



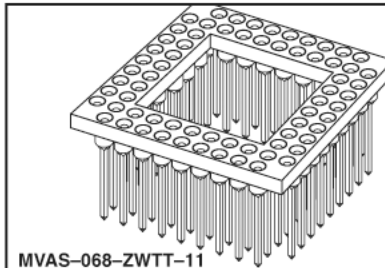
Note: Some sizes, styles and options are non-standard, non-returnable.

| -ZS, -ZU, -ZA, -J, -K = Printed Circuit | -ZW = Wire-Wrap | -ZE or -ZH = Elevated | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|--|--------------|--------------|----------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----|-------------|--------------|--------------|-------------|-------------|--------------|--------------|---|---|------------|-------|--------|---|-------|-----|-------------|-------------|-------------|--------------|-----|-------------|-------------|--------------|--------------|
| <p>Locking lead (-L) available. See OPTION.</p> <table border="1"> <thead> <tr> <th>LEAD STYLE</th> <th>X DIA</th> <th>Y TAIL</th> <th>Z OAL</th> </tr> </thead> <tbody> <tr> <td>-ZS, -ZU</td> <td>(0,51) .020</td> <td>(3,18) .125</td> <td>(7,62) .300</td> </tr> <tr> <td>-ZA</td> <td>(0,51) .020</td> <td>(4,57) .180</td> <td>(8,89) .350</td> </tr> <tr> <td>-J</td> <td>(0,64) .025</td> <td>(10,41) .410</td> <td>(15,24) .600</td> </tr> <tr> <td>-K</td> <td>(0,89) .035</td> <td>(12,95) .510</td> <td>(17,86) .703</td> </tr> </tbody> </table> <p>Insertion Depth = .095" to .145", Style ZS Component Part No. = EZ-1P1 Style ZU Component Part No. = EZ-6P1 Option L Component Part No. = SC-1L1 or EZ-1L1 Insertion Depth = .095" to .138", Style J Component Part No. = SC-1P3 Insertion Depth = .095" to .157", Style K Component Part No. = SC-2P1</p> <p>Styles J & K = 16 oz/pin insertion force</p> | LEAD STYLE | X DIA | Y TAIL | Z OAL | -ZS, -ZU | (0,51) .020 | (3,18) .125 | (7,62) .300 | -ZA | (0,51) .020 | (4,57) .180 | (8,89) .350 | -J | (0,64) .025 | (10,41) .410 | (15,24) .600 | -K | (0,89) .035 | (12,95) .510 | (17,86) .703 | <p>MHAS NOT AVAILABLE Shorter w/w tail lengths available. See OPTION.</p> <p>Insertion Depth = .125" to .157", Style ZW Component Part No. = EZ-1W(1) Style ZW-2 Component Part No. = EZ-1W(2) Style ZW-3 Component Part No. = EZ-1W(3)</p> | <p>MHAS NOT AVAILABLE</p> <table border="1"> <thead> <tr> <th>LEAD STYLE</th> <th>X DIA</th> <th>W TAIL</th> <th>Y</th> <th>Z OAL</th> </tr> </thead> <tbody> <tr> <td>-ZE</td> <td>(0,51) .020</td> <td>(4,32) .170</td> <td>(8,86) .349</td> <td>(13,77) .542</td> </tr> <tr> <td>-ZH</td> <td>(0,46) .018</td> <td>(3,81) .150</td> <td>(12,95) .510</td> <td>(17,86) .703</td> </tr> </tbody> </table> <p>Insertion Depth = .125" to .170", Style ZE Component Part No. = EZ-2P3 Insertion Depth = .125" to .145", Style ZH Component Part No. = EZ-2P2</p> | LEAD STYLE | X DIA | W TAIL | Y | Z OAL | -ZE | (0,51) .020 | (4,32) .170 | (8,86) .349 | (13,77) .542 | -ZH | (0,46) .018 | (3,81) .150 | (12,95) .510 | (17,86) .703 |
| LEAD STYLE | X DIA | Y TAIL | Z OAL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -ZS, -ZU | (0,51) .020 | (3,18) .125 | (7,62) .300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -ZA | (0,51) .020 | (4,57) .180 | (8,89) .350 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -J | (0,64) .025 | (10,41) .410 | (15,24) .600 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -K | (0,89) .035 | (12,95) .510 | (17,86) .703 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LEAD STYLE | X DIA | W TAIL | Y | Z OAL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -ZE | (0,51) .020 | (4,32) .170 | (8,86) .349 | (13,77) .542 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -ZH | (0,46) .018 | (3,81) .150 | (12,95) .510 | (17,86) .703 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -ZL = Low Profile | -ZM = Low Profile | -ZN or ZC = Micro Socket | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>MHAS & CHAS SERIES ONLY.</p> <p>Insertion Depth = .105" to .170", Component No. = EZ-3P1</p> | <p>MHAS & CHAS SERIES ONLY.</p> <p>Insertion Depth = .080" to .105", Component No. = EZ-4P1</p> | <p>MHAS & CHAS SERIES ONLY.</p> <table border="1"> <thead> <tr> <th>LEAD STYLE</th> <th>X DIA</th> <th>W HEAD</th> <th>Y</th> <th>Z OAL</th> </tr> </thead> <tbody> <tr> <td>-ZN</td> <td>(0,76) .030</td> <td>(0,51) .020</td> <td>(2,41) .095</td> <td>(4,83) .190</td> </tr> <tr> <td>-ZC</td> <td>(0,74) .029</td> <td>(0,25) .010</td> <td>(2,11) .083</td> <td>(4,19) .165</td> </tr> </tbody> </table> <p>ZN Insertion Depth = .080" to .150", ZN Component No. = EZ-5P1 ZC Insertion Depth = .080" to .140", ZC Component No. = EZ-6P1</p> | LEAD STYLE | X DIA | W HEAD | Y | Z OAL | -ZN | (0,76) .030 | (0,51) .020 | (2,41) .095 | (4,83) .190 | -ZC | (0,74) .029 | (0,25) .010 | (2,11) .083 | (4,19) .165 | | | | | | | | | | | | | | | | | | | | |
| LEAD STYLE | X DIA | W HEAD | Y | Z OAL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -ZN | (0,76) .030 | (0,51) .020 | (2,41) .095 | (4,83) .190 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -ZC | (0,74) .029 | (0,25) .010 | (2,11) .083 | (4,19) .165 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

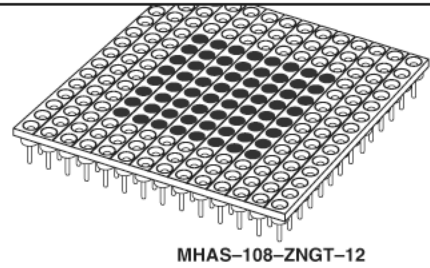
Due to technical progress, all designs, specifications and components are subject to change without notice.

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MVAS-068-ZWTT-11



MHAS-108-ZNGT-12

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| | | | | |
|---|---|--|--|--|
| <p>-21=273 Pins</p> <p>MSAS only.</p> | <p>-18=191 Pins</p> <p>MSAS only.</p> | <p>-18=179 Pins</p> <p>MSAS only.</p> | <p>-17=240 Pins</p> <p>MVAS & MSAS not available.</p> | <p>-17=209 Pins</p> <p>MSAS not available.</p> |
| <p>-17=169 Pins</p> <p>MSAS only.</p> | <p>-17=168 Pins</p> <p>MSAS only.</p> | <p>-16=172 Pins</p> <p>MVAS & MSAS not available.</p> | <p>-16=156 Pins</p> <p>MSAS only.</p> | <p>-15=181 Pins</p> <p>MVAS not available.</p> |
| <p>-15=176 Pins</p> <p>MSAS not available.</p> | <p>-15B=149 Pins</p> <p>MVAS & MSAS not available.</p> | <p>-15=145 Pins</p> <p>MVAS not available.</p> | <p>-14=132 Pins</p> <p>MVAS & MSAS not available.</p> | <p>-13=169 Pins</p> <p>MVAS & MSAS not available.</p> |
| <p>-13B=132 Pins</p> <p>MVAS & MSAS not available.</p> | <p>-13A=124 Pins</p> <p>MVAS & MSAS not available.</p> | <p>-13A=121 Pins</p> <p>MSAS not available.</p> | <p>-13=114 Pins</p> <p>MVAS & MSAS not available.</p> | <p>-13=101 Pins</p> <p>MVAS & MSAS not available.</p> |
| <p>-13A=133 Pins</p> <p>MVAS & MSAS not available.</p> | <p>-13=088 Pins</p> <p>MSAS not available.</p> | <p>-11=085 Pins</p> <p>MVAS & MSAS not available.</p> | <p>-11C=084 Pins</p> <p>MSAS not available.</p> | <p>-11=069 Pins</p> <p>MSAS not available.</p> |
| <p>-11=068 Pins</p> <p>MVAS & MSAS not available.</p> | <p>-10=084 Pins</p> <p>MVAS & MSAS not available.</p> | <p>-10=068 Pins</p> <p>MSAS not available.</p> | | |

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