

|                 |             |
|-----------------|-------------|
| Parts list:     | 999.355.ST  |
| Product:        | ARE I2.0 HF |
| Board:          | ARE 135     |
| Revision:       | 002         |
| Date of change: | 23.01.2024  |
| Author:         | Kösler      |



|                                                   |                                                |                                                                                                                                                                   |                                                                                                                                                                                                                                                  |
|---------------------------------------------------|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Board</b><br>Layer:<br>Material:<br>Thickness: | 4<br>FR4,2xL5M/ohne BD/IAL<br>1,0/35,35µCu/MLL | <b>Marketing type:</b><br>Roll table 25 x 9.8 mm Type:3M 3692 E<br><b>Kezeichnungstext:</b><br>AEG ID (Logo), boardname, Serien/Chargennummer, RoHS Kennzeichnung | <b>Temperaturbereich/Werte-Toleranz</b><br>Unless otherwise specified, a temperature range of -40°C to +85°C applies to all components. For passive components of the E-Series tolerance specifications, a tolerance of +/-5% generally applies. |
|---------------------------------------------------|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

| Nr. | Part                                             | Value                        | Bestücken | Nr of pieces | Tolerance +/- | Bauteil                         | Package                 | Description                                                                                                                             | height | Manufacturer       |
|-----|--------------------------------------------------|------------------------------|-----------|--------------|---------------|---------------------------------|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|--------|--------------------|
| 1   |                                                  | PCB                          | ja        | 1            |               |                                 |                         | ARE 135 HWV34                                                                                                                           |        |                    |
| 2   |                                                  | Etikett                      | ja        | 1            |               |                                 |                         |                                                                                                                                         |        |                    |
| 3   | CIN                                              | 4.7µF, 50V                   | ja        | 1            | <=10%         | CERAMIC-4.7µF-50V-10%-XSR(1206) | C1206                   |                                                                                                                                         |        |                    |
| 4   | CCOMP2                                           | 36µF, 50V                    | ja        | 1            | <=2%          | CERAMIC-36PF-50V-NPO(0402)      | C0402                   |                                                                                                                                         |        |                    |
| 5   | CCOMP                                            | 47nF, 25V                    | ja        | 1            |               | C-EUC0805                       | C0805                   | CAPACITOR, European symbol                                                                                                              |        |                    |
| 6   | RCOMP                                            | 10K, 50mW                    | ja        | 1            | <=1%          | R-EU_R0402                      | R0402                   | RESISTOR, European symbol                                                                                                               |        |                    |
| 7   | RT                                               | 124K, 63mW                   | ja        | 1            | <=1%          | R-EU_R0402                      | R0402                   | RESISTOR, European symbol                                                                                                               |        |                    |
| 8   | IC1                                              | TPS54540BQDDARQ1             | ja        | 1            |               | TPS54540BQDDARQ1                | SOIC 127P600X170-9N     | TPS54540B-Q1 4.5-V to 42-V Input, 5-A, Step-Down DC-DC Converter with Eco-mode                                                          | 1.7mm  | Texas Instruments  |
| 9   | D2                                               | PDS760-13                    | ja        | 1            |               | PDS760-13                       | POWERDI5                | Diode Schottky 60V 7A 3Pin PowerDI 5 Diodes Inc PDS760-13, SMT Schottky Diode, 60V 7A, 3-Pin PowerDI 5                                  |        | Diodes Inc.        |
| 10  | CB00T                                            | 100nF, 10V                   | ja        | 1            | 10%           | CERAMIC-100nF-10V-NPO(0402)     | C0402                   |                                                                                                                                         |        |                    |
| 11  | L4                                               | SRN6045-330M                 | ja        | 1            |               | SRN6045-330M                    | INDM8060X450N           | Power Inductor semi-shielded SMD 33uH Bourns SRN6045 Series Shielded Wire-wound SMD Inductor with a Ferrite Core, 33 uH +/-20% 1.5A Idc | 4.5mm  | Bourns             |
| 12  | RFBB                                             | 11K, 63mW                    | ja        | 1            | <=1%          | R-EU_R0402                      | R0402                   | RESISTOR, European symbol                                                                                                               |        |                    |
| 13  | RFBT                                             | 120K, 63mW                   | ja        | 1            | <=1%          | R-EU_R0402                      | R0402                   | RESISTOR, European symbol                                                                                                               |        |                    |
| 14  | C12                                              | 47µF, 16V                    | ja        | 1            |               | 16SVP647M                       | 16SVP647M               | PANASONIC ELECTRONIC COMPONENTS - 16SVP647M - CAP. ALU POLYMER, 47UF, 16V, RAD CAN                                                      | 4.5mm  | Panasonic          |
| 15  | J1, J3, J10, J701, J702, J703, J704, J801, J1005 | 0R                           | ja        | 13           |               | R-EU_R0402                      | R0402                   | RESISTOR, European symbol                                                                                                               |        |                    |
| 16  | D800                                             | SM6T36CA                     | ja        | 1            |               | SM6T36CA                        | DICOM5436X265N          | TVS Diode Bi-Directional SM6T36CA 64.3V, 600W, SMB 2-Pin                                                                                | 2.65mm | STMicroelectronics |
| 17  | D801                                             | TS5SW3U45 RVG                | ja        | 1            |               | TS5SW3U45 RVG                   | SCDFL3718X102N          | Schottky Diodes & Rectifiers Trench Schottky 3amp 45v                                                                                   | 1.02mm | Taiwan Semiconduct |
| 18  | C800                                             | 2.2µF 100V                   | ja        | 1            |               | C-EUC1210                       | C1210                   | CAPACITOR, European symbol                                                                                                              |        |                    |
| 19  | L801                                             | 2.2µH 0.7A                   | ja        | 1            |               | R-EU_R0805                      | R0805                   | RESISTOR, European symbol                                                                                                               |        | Würth              |
| 20  | C6, C1012                                        | 100nF 16V                    | ja        | 2            |               | CERAMIC-100nF-16V-NPO(0402)     | C0402                   |                                                                                                                                         |        |                    |
| 21  | C1013, C1014                                     | 10µF 16V                     | ja        | 2            | <=10%         | CPOL-EUC/6032-28R               | C/6032-28R              | POLARIZED CAPACITOR, European symbol                                                                                                    |        | Vishay / Sprague   |
| 22  | U1001                                            | BA7807FP-E2                  | ja        | 1            |               | BA7807FP-E2                     | BD33KASFPE2             | Voltage Regulator 1A 7V TO252-3                                                                                                         | 2mm    | ROHM Semiconduct   |
| 23  | C1                                               | 1µF                          | ja        | 1            | <=10%         | C-EUC0402                       | C0402                   | CAPACITOR, European symbol                                                                                                              |        |                    |
| 24  | Q200, Q201, Q202                                 | IRLML2803TRPBF               | ja        | 3            |               | IRLML2803TRPBF                  | SO176P237X112-3N        | IRLML2803TRPBF N-Channel MOSFET, 1.2 A, 30 V HEXFET, 3-Pin SOT-23 Infineon                                                              | 1.12mm | Infineon           |
| 25  | LED200                                           | KRTB AILMS1-5B5C-B1B12-0-R18 | ja        | 1            |               | KRTB AILMS1-5B5C-B1B12-0-R18    | KRTBAILMS15B5CB18120R18 | OSRAM OPTO SEMICONDUCTORS - KRTB AILMS1-5B5C-B1B12-0-R18 - LED, Red, Green, Blue, SMD, 120°, Rectangular, R 20mA, G 20mA, B 20mA        | 0.7mm  | OSRAM              |
| 26  | R208                                             | 3.3K                         | ja        | 1            |               | R-EU_R0402                      | R0402                   | RESISTOR, European symbol                                                                                                               |        |                    |
| 27  | R209                                             | 1K                           | ja        | 1            |               | R-EU_R0402                      | R0402                   | RESISTOR, European symbol                                                                                                               |        |                    |
| 28  | R210                                             | 7.5K                         | ja        | 1            |               | R-EU_R0402                      | R0402                   | RESISTOR, European symbol                                                                                                               |        |                    |
| 29  | L5                                               | 10uH                         | ja        | 1            |               | Gleichtakttdrosseln / Filter    | WE-SL2                  | Gleichtakttdrosseln / Filter WE-SL2 SMD Bifilar 2x10uH 1600mA                                                                           |        |                    |
| 30  | FB1                                              | 2720hm, 25MHz                | ja        | 1            |               | Ferritperle                     | WE-SUKW                 | Ferritperlen WE-SUKW SHole 2720hm 25MHz AEC-Q200                                                                                        |        |                    |
| 31  | D4                                               | BZV55-C5V6, T15              | ja        | 1            |               | Zener-Diode                     | SOD-80C-2               | Zener-Dioden BZV55-C5V6/SOD80LLDS                                                                                                       | 1.5mm  | Nexperia           |
| 32  | D5                                               | LL4148                       | ja        | 1            |               | Diode                           | SOD-80                  | Small Signal Diode                                                                                                                      | 1.5mm  | onsemi / Fairchild |
| 33  | IC200                                            | 74AHC125PW                   | ja        | 1            |               | 74ABT125PW                      | TSSOP14                 | Quad bus BUFFER, 3-state                                                                                                                |        |                    |
| 34  | C200                                             | 100nF                        | ja        | 1            |               | C-EUC0402                       | C0402                   | CAPACITOR, European symbol                                                                                                              |        |                    |
| 35  | L1, L6, L7, L8                                   | 742792122                    | ja        | 4            |               | 742792122                       | 1206                    | Ferritperlen WE-CBF 1206 100MHz 2200hm 300mA AECQ200                                                                                    | 1.6mm  | Würth              |
| 36  | FL1, FL2                                         | 744235251                    | ja        | 2            |               | 744235251                       | 744235251               | WE-CNSW SMT Common Mode Line Filter 1812                                                                                                | 3mm    | Würth              |
| 37  | C3                                               | N/A                          | nein      | 0            |               | CPOL-EUSMCA                     | SMC_A                   | POLARIZED CAPACITOR, European symbol                                                                                                    |        |                    |
| 38  | R200                                             | 10k                          | nein      | 0            |               | R-EU_R0402                      | R0402                   | RESISTOR, European symbol                                                                                                               |        |                    |
| 39  | R201                                             | 10k                          | nein      | 0            |               | R-EU_R0402                      | R0402                   | RESISTOR, European symbol                                                                                                               |        |                    |
| 40  | R202                                             | N/A                          | nein      | 0            |               | R-EU_R0402                      | R0402                   | RESISTOR, European symbol                                                                                                               |        |                    |
| 41  | R203                                             | N/A                          | nein      | 0            |               | R-EU_R0402                      | R0402                   | RESISTOR, European symbol                                                                                                               |        |                    |
| 42  | R205                                             | 10k                          | nein      | 0            |               | R-EU_R0402                      | R0402                   | RESISTOR, European symbol                                                                                                               |        |                    |
| 43  | R207                                             | N/A                          | nein      | 0            |               | R-EU_R0402                      | R0402                   | RESISTOR, European symbol                                                                                                               |        |                    |
| 44  | R10                                              | 10K                          | nein      | 0            |               | R-EU_R0402                      | R0402                   | RESISTOR, European symbol                                                                                                               |        |                    |
| 45  | R11                                              | 4.7K                         | nein      | 0            |               | R-EU_R0402                      | R0402                   | RESISTOR, European symbol                                                                                                               |        |                    |
| 46  | D1                                               | 1N4148WS                     | nein      | 0            |               | 1N4148WS                        | SCDFL2512X90N           | ON Semiconductor Switching Diode, 300mA 75V, 2-Pin SOD-323 1N4148WS                                                                     | 0.9mm  | ON Semiconductor   |
| 47  | Q4                                               | BC849CLT1G                   | nein      | 0            |               | BC849CLT1G                      | SOT96P237X111-3N        | NPN Bipolar Transistor                                                                                                                  | 1.11mm | onsemi             |
| 48  | K2                                               | G6L-1F-DC5                   | nein      | 0            |               | G6L-1F-DC5                      | G6L-1F-DC5              | Low Signal Relays - PCB LO PROF SPST 5VDC                                                                                               |        |                    |
| 49  | D500                                             | MMSD4148T1G                  | nein      | 0            |               | MMSD4148T1G                     | SOD3716X135N            | ON SEMICONDUCTOR - MMSD4148T1G - u4E8Cu6781u7BA1,u9AD8u901F SOD-123                                                                     | mm     | Omron Electronics  |
| 50  | R515                                             | 3.6K                         | nein      | 0            |               | R-EU_R1206                      | R1206                   | RESISTOR, European symbol                                                                                                               | 1.35mm | ON Semiconductor   |
| 51  | R516                                             | 3.6K                         | nein      | 0            |               | R-EU_R1206                      | R1206                   | RESISTOR, European symbol                                                                                                               |        |                    |
| 52  | C2                                               | 10u 10V                      | nein      | 0            |               | C-EUC0805                       | C0805                   | CAPACITOR, European symbol                                                                                                              |        |                    |
| 53  | IC2                                              | TLP278BA E                   | nein      | 0            |               | TLP278BA E                      | SOIC127P1000X230-6N     | High Speed IC Coupler, SO6L                                                                                                             | 2.3mm  | Toshiba            |
| 54  | R508                                             | 3.3K                         | nein      | 0            |               | R-EU_R0402                      | R0402                   | RESISTOR, European symbol                                                                                                               |        |                    |
| 55  | L2                                               | Ferrit We74279204            | nein      | 0            |               | L-EUR0805                       | R0805                   | INDUCTOR, European symbol                                                                                                               |        |                    |
| 56  | L3                                               | Ferrit We74279204            | nein      | 0            |               | L-EUR0805                       | R0805                   | INDUCTOR, European symbol                                                                                                               |        |                    |
| 57  | L9                                               | Ferrit We74279204            | nein      | 0            |               | L-EUR0805                       | R0805                   | INDUCTOR, European symbol                                                                                                               |        |                    |
| 58  | R15                                              | 10K                          | nein      | 0            |               | R-EU_R0402                      | R0402                   | RESISTOR, European symbol                                                                                                               |        |                    |
| 59  | R16                                              | 10K                          | nein      | 0            |               | R-EU_R0402                      | R0402                   | RESISTOR, European symbol                                                                                                               |        |                    |
| 60  | D3                                               | SP0503BAHTG                  | nein      | 0            |               | SP0503BAHTG                     | SP0503BAHTG             | ESD Suppressors / TVS Diodes TVS AVAL DIODE SMT                                                                                         | 1.22mm | LITTELFUSE         |
| 61  | C4                                               | 4.7u 10V                     | nein      | 0            |               | CPOL-EUA/3216-18R               | A/3216-18R              | POLARIZED CAPACITOR, European symbol                                                                                                    |        |                    |
| 62  | C5                                               | 4.7u 10V                     | nein      | 0            |               | CPOL-EUA/3216-18R               | A/3216-18R              | POLARIZED CAPACITOR, European symbol                                                                                                    |        |                    |
| 63  | C10                                              | 100n                         | nein      | 0            |               | C-EUC0603                       | C0603                   | CAPACITOR, European symbol                                                                                                              |        |                    |
| 64  | C11                                              | 100n                         | nein      | 0            |               | C-EUC0603                       | C0603                   | CAPACITOR, European symbol                                                                                                              |        |                    |
| 65  | R1                                               | 1K                           | nein      | 0            |               | R-EU_R0402                      | R0402                   | RESISTOR, European symbol                                                                                                               |        |                    |
| 66  | R2                                               | 47.5K                        | nein      | 0            |               | R-EU_R0402                      | R0402                   | RESISTOR, European symbol                                                                                                               |        |                    |
| 67  | R3                                               | 22.1K                        | nein      | 0            |               | R-EU_R0402                      | R0402                   | RESISTOR, European symbol                                                                                                               |        |                    |
| 68  | IC3                                              | CP2102N-A02-GQFN20           | nein      | 0            |               | CP2102N-A02-GQFN20              | CP2102NA02GQFN20        | USB Interface IC USB to UART bridge - QFN20                                                                                             | 0.8mm  | Silicon Labs       |
| 69  | R13                                              | 10K                          | nein      | 0            |               | R-EU_R0402                      | R0402                   | RESISTOR, European symbol                                                                                                               |        |                    |

|    |                                                                                       |               |      |   |  |               |         |                              |  |  |
|----|---------------------------------------------------------------------------------------|---------------|------|---|--|---------------|---------|------------------------------|--|--|
| 70 | R14                                                                                   | 10K           | nein | 0 |  | R-EU_R0402    | R0402   | RESISTOR, European symbol    |  |  |
| 71 | U1                                                                                    | 74AHC1G125DBV | nein | 0 |  | 74AHC1G125DBV | SOT23-5 | TRI-STATE SINGLE BUSS BUFFER |  |  |
|    | J2, J4, J5, J6, J7, J8, J9, J11, J12, J13, J14, J15, J16, J17, J505, J534, J601, J602 |               |      |   |  |               |         |                              |  |  |
| 72 | J601, J602                                                                            |               | nein | 0 |  | R-EU_R0402    | R0402   | RESISTOR, European symbol    |  |  |