

Flight Control Computers

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Flight Control Computers

VISHAY Components used:

- Power MOSFETS
- Controller ICs
- LDOs
- Load and Signal Switches
- Switching Diodes and Rectifiers
- Transient/Overvoltage Protection Devices
- ESD Protection Devices
- Capacitors
- Resistors
- NTC and PTC Thermistors
- Inductors/EMI Filters

Application Overview

Flight Control Computers : Adapter Unit, Digital Control Interface

Amplifier Gain Setting, BIAS compensation

| Product Name | Status | Description | Features | Package | Q-Level |
|--------------------|--------|---|--|-----------------------------------|---------------------------------------|
| RV | | Thin Film Chip Resistors CECC (#) 40401-010 Qualified | Very low noise <35db Very low voltage coeff. <0.1ppm/V | SMD EIA Size 0505;0603 .120 | QPL MIL -PRF-55342 "S";"V"Level |

Flight Control Computers : Adapter Unit, Power Supply

Primary Transformer

| Product Name | Status | Description | Features | Package | Q-Level |
|----------------------------------|--------|---|--|---------|----------------------|
| Custom Magnetics | | SWITCH MODE MAGNETICS PWM, PSM and FM transformers Power, filter and switchmode inductors | covers wide range of high frequency application | | UL, CSA IEEE, VDE |

Flight Control Computers : Adapter Unit, Sensor Interface

Gain Setting

| Product Name | Status | Description | Features | Package | Q-Level |
|------------------------|--------|---|---|---------------------------------|---------------------------------------|
| M55342 | | Thin Film Resistor, Surface Mount Chip QPL MIL-PRF-55342 Qualified Lot TC Ratio < 5ppm/°C | Very low noise Non Inductive Lot TC Ratio < 5ppm/°C | SMD EIA Size 0502 ...2512 | QPL MIL -PRF-55342 "S";"V"Level |

Flight Control Computers : Control Display, Display

Display Unit

| Product Name | Status | Description | Features | Package | Q-Level |
|--------------------------------------|--------|--|--|---------|---------|
| LCD, Color TFT, OLED | | High-Quality Displays Offer Excellent Human-to-Machine Interface Solutions | Standard and custom display / modules for flight control | | |

Flight Control Computers : Control Display, Interface

Signal Switch

| Product Name | Status | Description | Features | Package | Q-Level |
|--|--------|--|---------------------------|--------------|---------|
| DG2741 DG2742 DG2743 | NEW | Dual SPST Analog Switch Low-Voltage, 0.8 Ohm RON, | Low voltage OP(1.6V-3.6V) | SMD MSOP8 | |

Flight Control Computers : Control Display, System Power

Load Switch

| Product Name | Status | Description | Features | Package | Q-Level |
|-----------------------------|--------|--|--|---------------|---------|
| SUD50P04-08 | | P-Channel 40-V (D-S) MOSFET TrenchFET® power MOSFET | Vds=-40V, Vgs=20V, Id=-50 Rds=8.1mOhm | SMD TO-252 | |

Flight Control Computers : Databus Interface, Multiplexer

Temperature Compensation

| Product Name | Status | Description | Features | Package | Q-Level |
|----------------------|--------|--|---|-----------------------------------|---------------|
| TFPT | | SMD PTC Nickel Thin Film Linear Thermistors | Operation range -55 °C to TCR @25°C = 4110ppm/K R25 Tol.: ± 0.5;1;5 % | SMD 0603;0805;1206 EIA Size | UL E148885 |

Flight Control Computers : Mass Memory Unit, Power Backup

Energy Storage

| Product Name | Status | Description | Features | Package | Q-Level |
|---------------------|--------|---|--|------------------------------|--------------------------------|
| T97 | | Solid Tantalum Chip Cap. TANTAMOUNT® Hi-Rel COTS, Ultra-Low ESR | High reliability; grading available | SMD V;D;E;R;F;Z; M;H;N | HiRelCOTS MIL -PRF-55365 |

Flight Control Computers : Mass Memory Unit, System Power

Transient Protection

| Product Name | Status | Description | Features | Package | Q-Level |
|-----------------------------------|--------|--|--|------------------------|----------|
| TPSMP6.8 thru TPS | | Transient Voltage Suppressors HighPower Density Surface MountPAR® eSMP® Series | Tj=185°C capability Very Low Profile Excelent Clamping | SMD DO-220AA SMP | AEC-Q101 |

Flight Control Computers : Processor Board, Chipset Power

Storage Inductor

| Product Name | Status | Description | Features | Package | Q-Level |
|--------------------------------|--------|--|--|-----------------------|---------|
| IHLP-4040DZ-01 | | Low Profile,High Current IHLP® Inductor Shielded construction | Low DCR/mH/Volume Allmost no saturation Ultra low buzz noise | SMD 4040 11x11x4mm | |

Flight Control Computers : Processor Board, CPU Power

High-Side Mosfet

| Product Name | Status | Description | Features | Package | Q-Level |
|--------------------------|--------|--|---|---------|---------|
| SI4162DY | NEW | N-Channel 30-V (D-S) MOSFET TrenchFET® Power MOSFET | Vds=30V, Vgs=20V, Id=19.3 Rds=7.9m ohm, Qgd=8.8n 100% Rg and UIS Tested | SMD-SO8 | |

Low-Side MOSFET

| Product Name | Status | Description | Features | Package | Q-Level |
|--------------------------|--------|--|--|------------|---------|
| Si4164DY | NEW | N-Channel 30-V (D-S) MOSFET TrenchFET® Power MOSFET | Vds=30V, Vgs=20V, Id=30A Rds=3.2m ohm, Qgd=26.5 100% Rg and UIS Tested | SMD SO8 | |

Schottky Diode

| Product Name | Status | Description | Features | Package | Q-Level |
|-------------------------|--------|--|---------------------|---------------------|---------|
| SS32HE3 | | Surface Mount Schottky Barrier Rectifier Low profile package Low power losses, high efficiency | If(AV)=1A; IFSM=40A | SMD-DO-214AC SMA | |

Temperature Sensor

| Product Name | Status | Description | Features | Package | Q-Level |
|------------------------------|--------|---|----------|---------|---------|
| NTHS0603N03N | | NTC Thermistors, SMD 0402, 0603, 0805, 1206 Chip High density monolithic construction | | | |

Flight Control Computers : Processor Board, Other Device Power

Backup Supply

| Product Name | Status | Description | Features | Package | Q-Level |
|--------------------|--------|---|--|------------|---------|
| ST | | SuperTan® Wet Tantalum Capacitors with Hermetic Seal | Very High Capacitance OT -55°C ...+85°C | TH / axial | |

Flight Control Computers : Processor Board, System Power

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| Product Name | Status | Description | Features | Package | Q-Level |
|------------------------|--------|--|--|--------------------|---------|
| SiS426 | | N-Channel 20-V (D-S) MOSFET TrenchFET® Power MOSFET | Vds=20V, Vgs=20V, Id=35A 100% Rg and UIS Tested | SMD PPAK 1212-8 | |