

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
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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	