

List of Exhibits

A:

- ID-Label
- Photo of the Equipment
- Photo of Interior Views
Including all PCB's

B:

- Instruction Manual
- Technical Documentation

C:

- Test Report

Technical Characteristics of the A.D.C. Radar System

Issue 1.5

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ACC pulse doppler radar system

Technical Description

Automotive Distance
Control Systems GmbH

1. General Description

The A.D.C. automotive radar system for autonomous intelligent cruise control (AICC) and collision warning monitors the traffic area in front of the vehicle using three stationary independent millimeter wave radar beams.

Moving and stationary objects are detected and their distance and relative velocity is measured and processed continuously.

Sixteen times per second the actual traffic situation is analyzed by a digital signal processor within the ECU supplying information to engine control and brake systems in order to operate the vehicle in a distance controlled mode referenced to the relevant object ahead. In case of critical situations a warning can be given to the driver in order to enhance his reaction time.

Due to its physical nature the radar sensor is offering excellent performance characteristics even in adverse weather conditions (fog, rain and snow).

Additional information of vehicle driving conditions is required from standard or specialized in-vehicle sensors, e.g. speed, steering angle and/or yaw rate. This data is made available to the ECU via a universal car network (e.g. CAN) or specific interface circuits.

System hardware configuration is characterized by a two box design with a radar sensor (front end) mounted in the front of the car, typically behind the radiator, and a related Electronic Control Unit in an arbitrary location. Car specific demands and cost issues may lead to a one box solution in the future.

Packaging of the radar frontend is self-contained and the unit is applicable in space critical vehicle environments. The antenna design is based on a monostatic patented reflector arrangement offering optimum mechanical dimensions.

A block diagram of the system is shown in fig. 1

ACC pulse doppler radar system

Technical Description

A.D.C.

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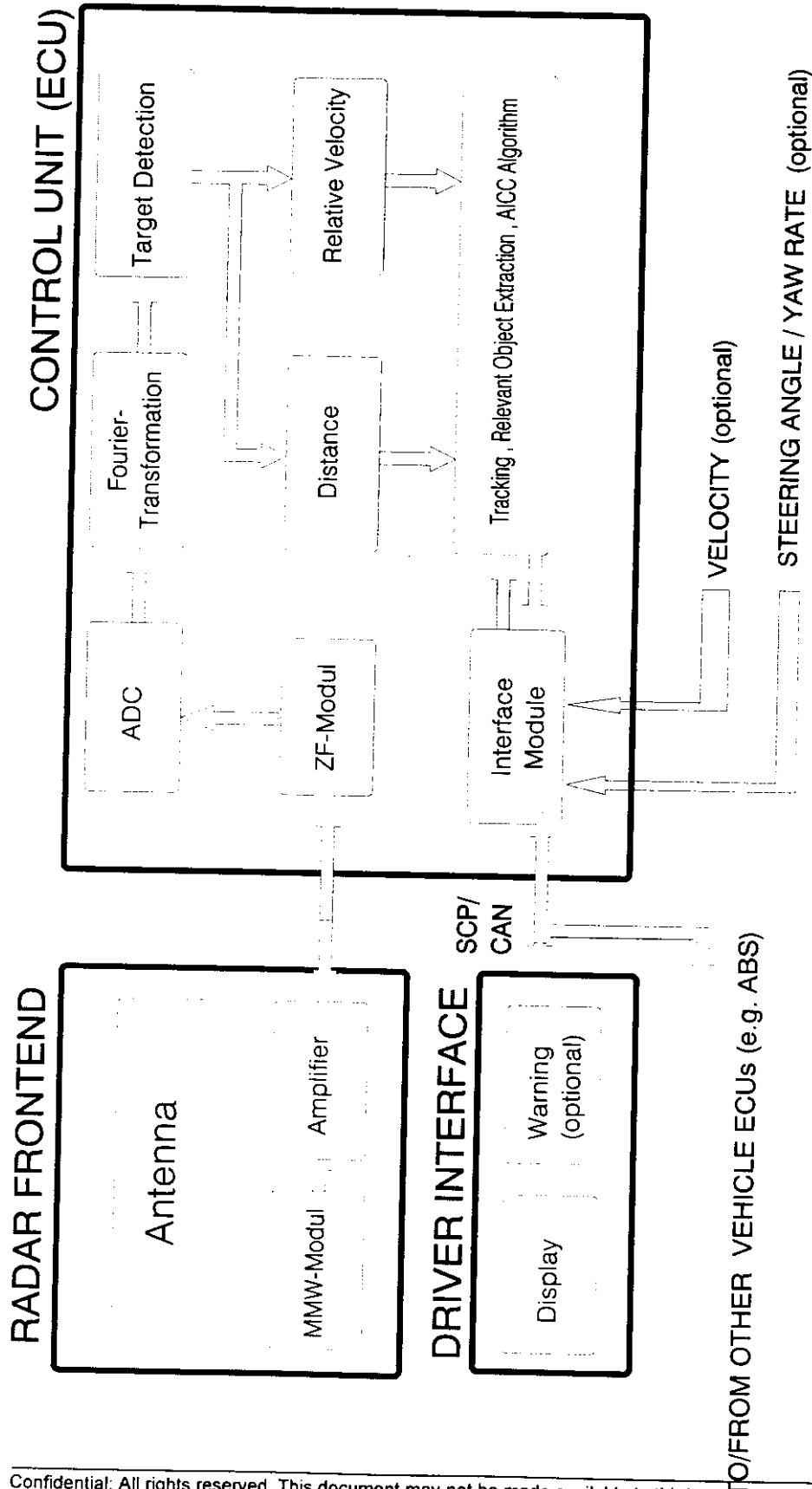


Fig.1 AICC Radar System Functional Block Diagram

2. Technical Characteristics

2.1. System Key Features

Table 1 summarizes technical key features on system level.

Parameter	Value
Operating Frequency	76 ... 77 GHz
Modulation Principle	FM - Pulse Doppler
Average Output Power	200 μ W
Beams	three beams with 3.4 ° each
Number of Objects	up to 20
Range	0.5 150 m
Range resolution	1 m (between 7 and 150 m)
Relative velocity	-50 200 km/h
Velocity resolution	1 km/h
Angle Resolution	0.5 °
Processing cycle time	66 ms

Table 1 : Technical Key Features

ACC pulse doppler radar system

Technical Description

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2.2. Detection Performance

The basic data detection requirement is to measure distance, relative speed, and reflection signal amplitude of moving and stationary objects in three beams. Angular target position is calculated by interpolation algorithms based on signal levels in adjacent beams.

Some technical data of detection performance is summarized in table 2.

Parameter	Value
Antenna beam width azimuth	10.2° (-3dB)
Antenna beam width elevation	3.0° (-3dB)
Range gates	30 per beam , 5m long
Target separation	5 m in longitudinal direction
Multiple target capability	up to 20
Min. detectable radar cross section	100 m : 1 qm ² 150 m : 10 qm ²
Max. detectable radar cross section	50 ... 150 m: 10000 qm ² 5 ... 150 m: 100000 qm ² (saturated)

Table 2 : Detection Performance

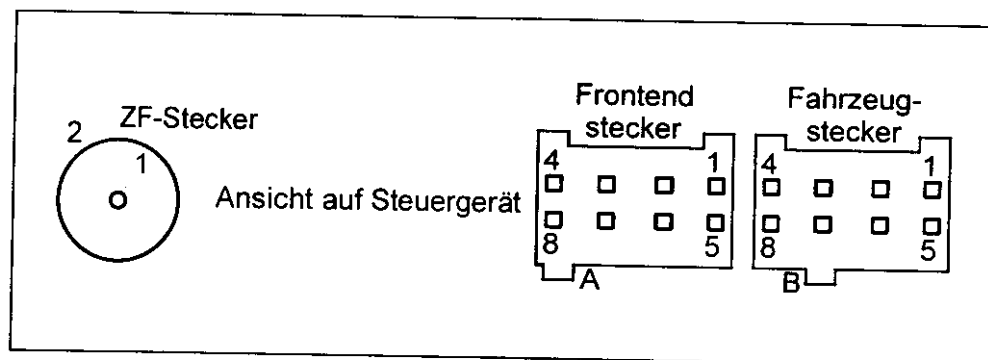
ACC pulse doppler radar system

Technical Description

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2.3. Electrical Interfaces

2.3.1. Electronic Control Unit



Operating input voltage:	9 V ... 32 V
Reverse polarity protection :	Yes
Input current :	< 2A
Short circuit protection :	all inputs/output against ground and V _{batt}
Vehicle data interface:	AMP Micro Quadlock (8 pins)
Frontend data interface:	AMP Micro Quadlock (8pins)

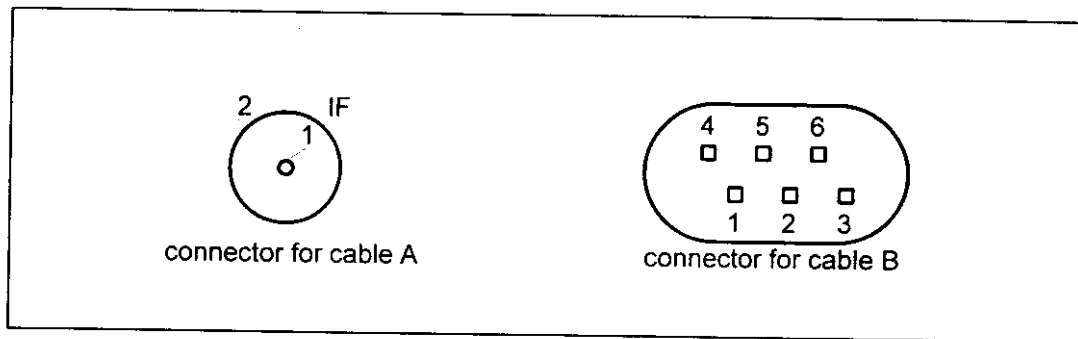
ACC pulse doppler radar system

Technical Description

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2.3.2. Interface Frontend - ECU

Signals between frontend and electronic control unit are transferred via two cables (cable A, cable B). Via cable B additionally the power for the frontend is supplied.



The IF-Signal is transferred from the frontend FE to the electronic control unit ECU.

IF- Signal :	Coaxial (180 MHz) ,
IF-Frequency:	180 MHz $\pm$ 20 MHz
IF-Bandwidth:	60 MHz min
IF-impedance:	50 Ohm
IF Return Loss:	- 15 dB max
IF Peak Power:	+10 dBm max
Data Connector	AMP Micro Quadlock (6 pins)
Data (max. baudrate):	30 kBd
Power Supply:	15 V / .7 A (generated by ECU)
Ripple on VFE:	100 mV, if C _{FE} > 100 μ F
Inrush current:	1.0 A max for 1 sec.

ACC pulse doppler radar system

Technical Description

A.D.C.

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2.4. Environmental Conditions

2.4.1. Electronic Control Unit

Operating temperature range: -25°C ... + 70 °C

Storage temperature range: -40°C ... + 105 °C (+125°C for 180 min)

2.4.2. Radar Frontend

Operating temperature range: -25°C ... + 70 °C (full performance)

+70°C ... + 95 °C (sensor switched off)

Storage temperature range: -40°C ... + 105 °C (+125°C for 180 min)

Vibration levels:

- 1g over 1Hz ... 13 Hz
- 5g over 13 Hz ... 30 Hz
- 1g over 30 Hz ... 2 KH

2.5. Self Diagnostic Functions

Self diagnostic information is provided via a serial diagnostics interface under following conditions :

- Frontend performance limitations or failures in different categories

ACC pulse doppler radar system

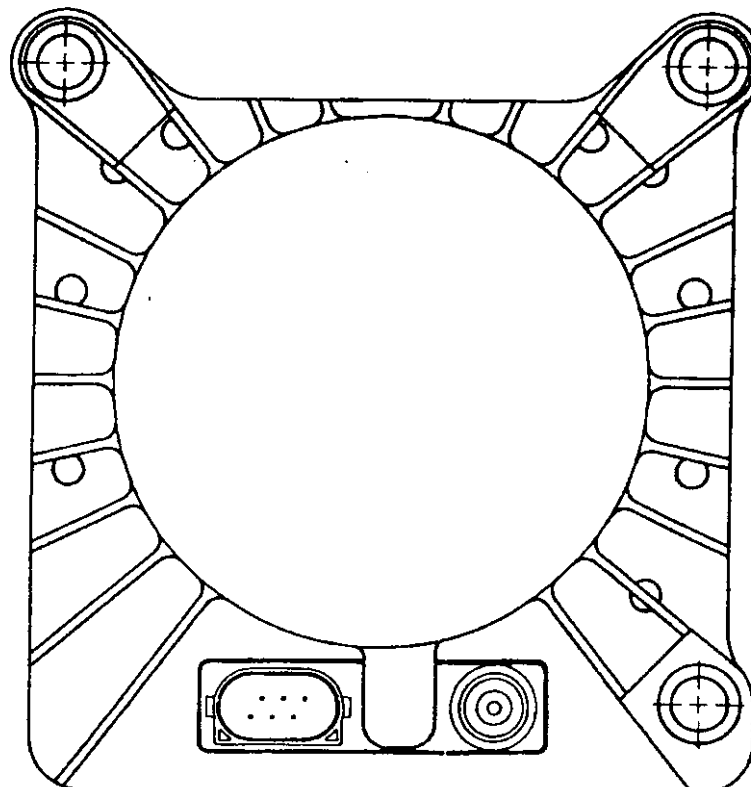
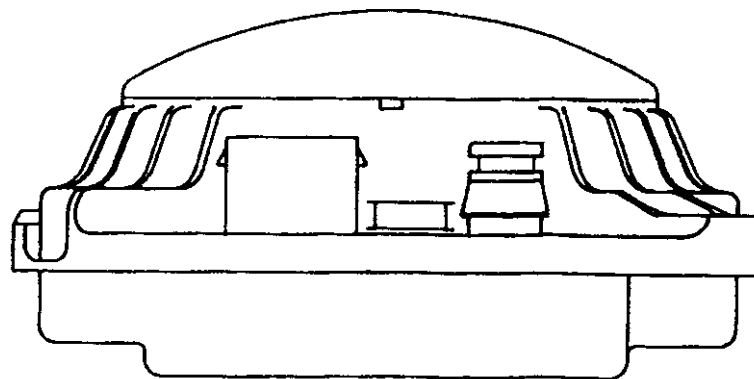
Technical Description

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- Harness defect between Frontend and ECU in different categories
- ECU internal failures

2.6. Mechanical dimensions

2.6.1. Radar frontend



ACC pulse doppler radar system

Technical Description

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Mechanical dimensions :

Circular diameter :	100 mm
Height :	70 mm
Outer dimensions :	132 mm x 132 mm (without brackets)
Packaging requirements :	IP 6k9
Weight :	850 gr.

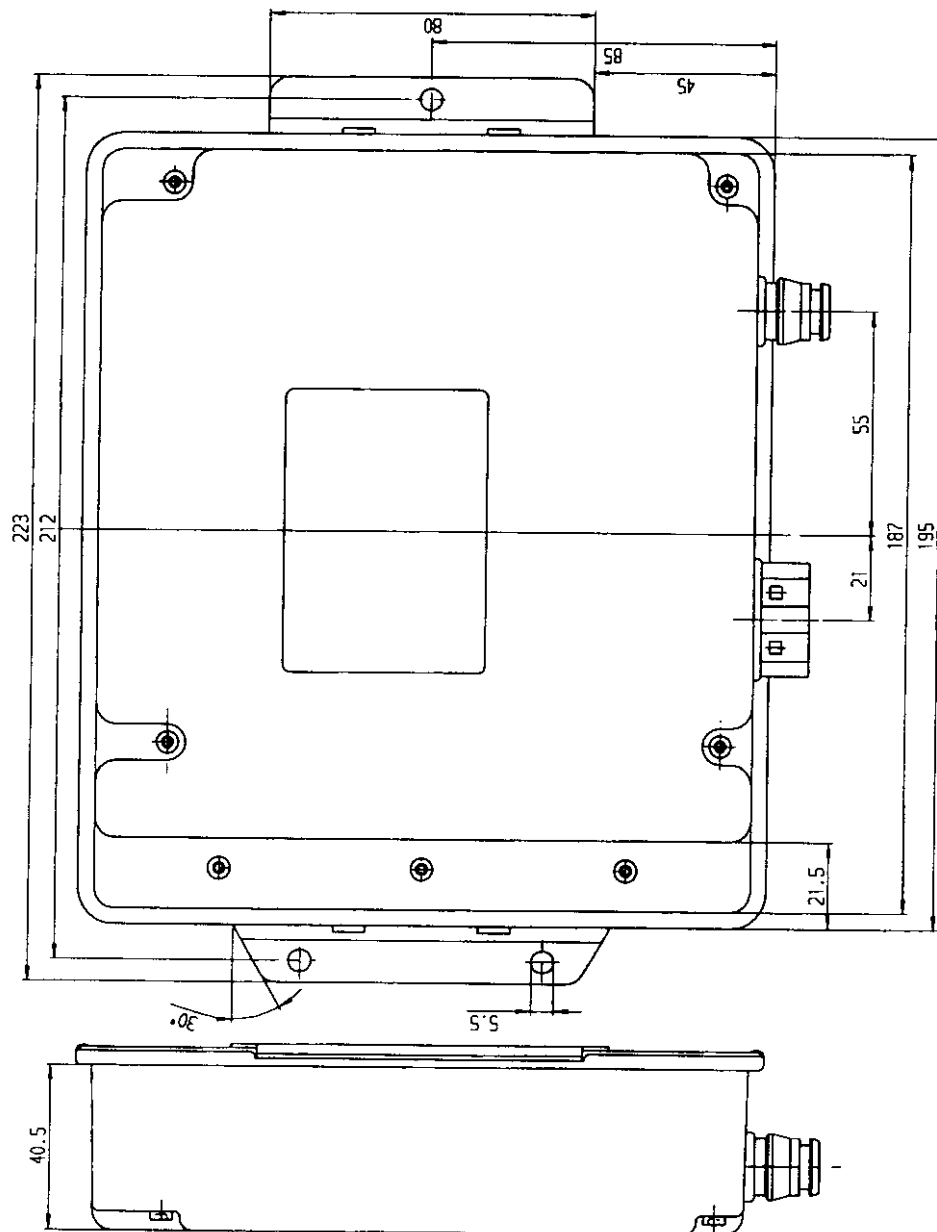
2.6.2. Electronic Control Unit

Mechanical dimensions:	225mm x 195mm x 45mm
Packaging requirements :	IP 6k6
Weight :	805 gr.

ACC pulse doppler radar system

Technical Description

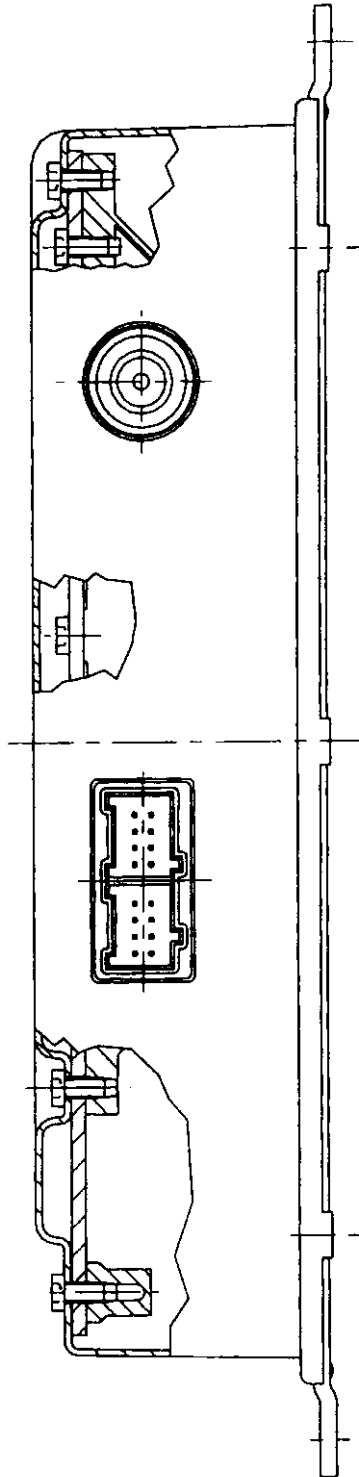
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ACC pulse doppler radar system

Technical Description

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ACC pulse doppler radar system

Technical Description

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Name	Cod.	Nr.	Name	Beschreibung
Frontend-stecker	A	1	GND	Massebezugspotential für das Frontend
Frontend-stecker	A	2	DATA-	Serielle Schnittstelle zwischen SG und Frontend
Frontend-stecker	A	3	-	Nicht benutzt
Frontend-stecker	A	4	VFE-	Negative Versorgungsspannung für das Frontend
Frontend-stecker	A	5	-	Nicht benutzt
Frontend-stecker	A	6	DATA+	Serielle Schnittstelle zwischen SG und Frontend
Frontend-stecker	A	7	-	Nicht benutzt
Frontend-stecker	A	8	VFE+	Positive Versorgungsspannung für das Frontend

Name	Cod.	Nr.	Name	Beschreibung
Fahrzeug-stecker	B	1	CANH	High Speed CAN-Bus zur Kommunikation
Fahrzeug-stecker	B	2	DIAG	Diagnoseleitung (K-Leitung)
Fahrzeug-stecker	B	3	-	Nicht benutzt
Fahrzeug-stecker	B	4	KL67	Positive Versorgungsspannung
Fahrzeug-stecker	B	5	CANL	High Speed CAN-Bus zur Kommunikation
Fahrzeug-stecker	B	6	-	Nicht benutzt
Fahrzeug-stecker	B	7	-	Nicht benutzt
Fahrzeug-stecker	B	8	KL31	Negative Versorgungsspannung für das Frontend

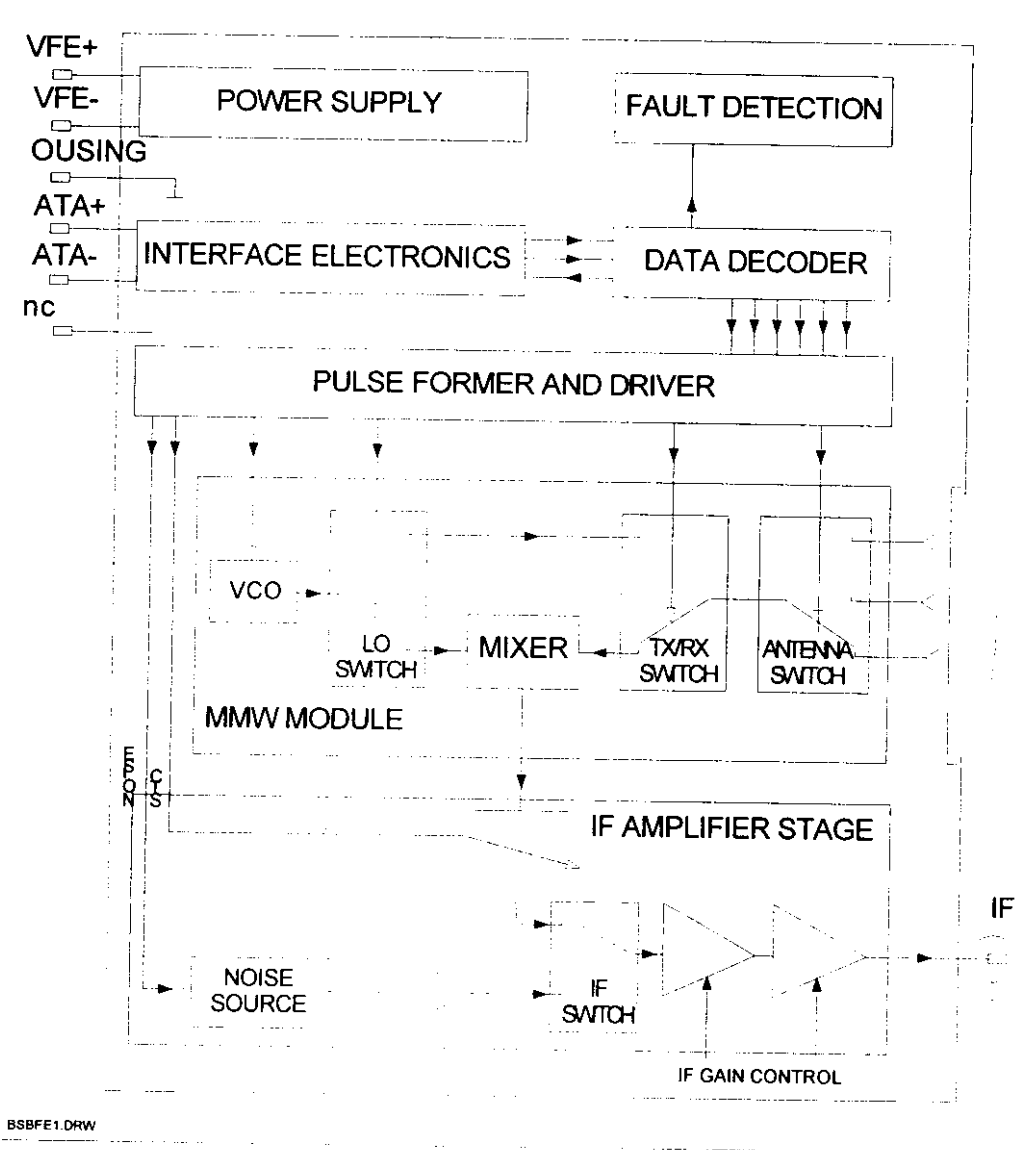
Schutzart nach DIN 40 050: IP 30

Name	Cod.	Nr.	Name	Beschreibung
ZF-Stecker	ZF	1	ZF+	180MHz-Zwischenfrequenzsignal
ZF-Stecker	ZF	2	ZF-	Hochfrequenzmasseverbindung

Principal Block Diagram of the ARS 100 Sensor

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P.Glocker, Jan. 11, 1999



Oszillators in the sensor:

Clock generator for controller (11.260MHz)

Stueck	ME	Identnr.	Bezeichnung	Lieferant	Lieferantenbezeichnung	Gesp.	Lager	IN	Lager	MLA
4	ST	195307	BUCHSE	AMP	50462-7.....					
6	ST	191306	CAC* 33U20% 25 8E-D S-12	Nichicon Corp.	UUT1E330MCR16S.....		0		0	
				Panasonic GMBH	EEV HA 1E 330 P.....		0		0	
1	ST	192996	CKC* 1N 2% 50NPO S-80805	Kemet	C0805C102G5GAC.....		0		0	
				TDK Electronics	C2012COG1H102GT.....		0		0	
3	ST	194888	CKC* 1N10% 50COG S-80603	AVX Ceramics	0603 5A 102 K AT2A.....		0		0	
17	ST	192910	CKC* 1N10% 63X7R S-80603	Kemet	.....		0		0	
				Murata Elek.	.....		0		0	
				Philips Compon.	2222 58616 614.....		0		0	
				TDK Electronics	.....		0		0	
6	ST	192251	CKC* 1U10% 16X7R S-81206	Kyocera	CH316 X7R 105K 16.....		0		36570	
				TDK Electronics	C3216X7R1C105KT.....		0		36570	
2	ST	192932	CKC* 10N10% 63X7R S-80603	Kemet	C0603C103K5RAC.....		0		0	
				Murata Elek.	GRM39X7R103K50PT.....		0		0	
				Philips Compon.	2222 58616 627.....		0		0	
				TDK Electronics	C1608X7R1H103KT.....		0		0	
6	ST	194285	CKC* 12P 5% 63NPO S-80603	Kemet	.....		0		0	
				Murata Elek.	.....		0		0	
				Philips Compon.	2222 867 15129.....		0		0	
				TDK Electronics	.....		0		0	
16	ST	190953	CKC* 22N10% 50X7R S-80805	Kemet	C0805C223K5RAC.....		0		172000	
				TDK Electronics	C2012X7R1H223KT.....		0		172000	
2	ST	190574	CKC* 22P 5% 63COG S-80805	Kemet	C0805C220J5GAC.....		0		8000	
				Philips Compon.	2222-861-15-229.....		0		8000	
				Siemens AG	B37940-K5220-J62.....		0		8000	
				TDK Electronics	C2012COG1H220JT.....		0		8000	
18	ST	190573	CKC*100N10% 50X7R S-80805	Kemet	C0805C104K5RAC.....		270000		328000	
				TDK Electronics	C2012X7R1H104KT.....		270000		328000	
				Vitramon GMBH	VJ0805Y104KXAT.....		270000		328000	
16	ST	191770	CKC*100P 5% 50NPO S-80603	Kemet	.....		0		20000	
				ROHM Electro.	MCH185A101JK.....		0		20000	
				TDK Electronics	C1608 CH 1H 101 JT.....		0		20000	
1	ST	194766	CKC*2,2P ** 50COG S-80603	Kemet	C0603C229C5GAC.....		0		0	
				Murata Elek.	GRM39COG2R2C50PT.....		0		0	
				TDK Electronics	C1608COG1H2R2CT.....		0		0	
1	ST	194159	CKC*470P 2% 50COG S-80805	Kemet	C0805C471G5GAC.....		0		0	
				Murata Elek.	GRM40COG471G50PT.....		0		0	
				TDK Electronics	C2012COG1H471GT.....		0		0	
				Vitramon GMBH	VJ0805A471GXAT.....		0		0	
1	ST	191480	CTC* 10U20% 10 S-8TNTB	Kemet	T491B106K010AS.....		0		8000	
1	ST	195227	CTC* 47U20% 20 S-8TNTB	Kemet	T494X476M020AS.....		330		0	
				Siemens AG	B45197-A4476-M50.....		330		0	
2	ST	190958	DSC*LS4148 D0213 S-8	TEMIC	LS4148.....		40000		667500	
2	ST	191766	DZC*BZT55C5V1*D0213 S-8	Philips Compon.	BZT55C5V1.....		12500		5000	
				TEMIC	BZT55C5V1.....		12500		5000	
					TZM55C5V1.....		12500		5000	
1	ST	192492	DZC*BZT55C9V1 D0213 S-8	TEMIC	BZT55C9V1.....		0		0	
1	ST	191070	DZC*P6SMB20* SMB S-8	Motorola GMBH	P6SMB20AT3.....		2500		0	
4	ST	194765	FHF*BLM11A601SPT S-12	Murata Elek.	BLM11A601SPT.....		120		0	
5	ST	194918	FHF*NFM41P11C* 4516S-12	Murata Elek.	NFM41P11C204T1.....		0		0	
1	ST	190286	IC *74HC00 SO-14 S-16	Motorola GMBH	MC74HC00AD.....		0		0	
				Philips Compon.	PC74HC00T.....		0		0	
1	ST	192560	IC *LM2941S* T0263 S-24	National Semi.	LM2941S.....		0		0	
1	ST	195564	IC *MAX810L* SOT23 S-8	Maxim GMBH	MAX810LEUR-T.....		0		0	
1	ST	190918	IC *X24C08S8I SO-8 S-8	Xicor GMBH	.....		0		0	
1	ST	192118	ICC*65ALS180* SO-14 S-14	Texas Instrum.	SN65ALS180D.....		0		0	
3	ST	194361	ICC*74AC11000*SO-16 S-16	Texas Instrum.	74AC11000DR.....		0		0	
1	ST	194343	ICC*74AC11008*SO-16 S-16	Texas Instrum.	74AC11008DR.....		0		0	
1	ST	194167	ICC*74AC11032*SO-16 S-16	Texas Instrum.	74AC11032DR.....		0		0	
1	ST	194344	ICC*74AC11086*SO-16 S-16	Texas Instrum.	74AC11086DR.....		0		0	
2	ST	194168	ICC*74AC11244*SO-24 S-24	Texas Instrum.	74AC11244DR.....		0		0	
1	ST	194166	ICC*74ACT11000*SO-16 S-16	Texas Instrum.	74ACT11000DR.....		0		0	
1	ST	194360	ICC*74HCT4538*SO-16 S-16	Harris Semicon.	CD74HCT4538M.....		0		0	
				Philips Compon.	PC74HCT4538D.....		0		0	
1	ST	194165	ICC*AD8402AR* SO-14 S-14	Analog Devices	AD8402AR10.....		0		0	
1	ST	194218	ICC*B101312U *SO-20 S-24	Atmel	B101312U.....		0		0	
1	ST	190260	ICC*LM2904M SO-8 S-8	National Semi.	LM2904M.....		0		5000	
				Philips Compon.	LM2904D.....		0		5000	
1	ST	194190	ICC*LM75* SO-8 S-8	National Semi.	LM75CIMX-5.....		0		0	
2	ST	194020	ICC*MC7805BD2*D2PAK S-24	Motorola GMBH	MC7805BD2TR4.....		0		3200	
1	ST	195426	ICM*87C54-16* PROGRAM.	EBV Elektronik	AN87C54-16 / SW = 2.1.....		0		0	
4	ST	191343	LSD* 1U SIMID S-8	Siemens AG	B82432-A1102-M.....		0		0	
1	ST	190895	LSD* 51U 0,5A S-12	Siemens AG	B82790-S0513-N201.....		13500		195925	
1	ST	194217	LSD*PLM250S40*SMD	Murata Elek.	PLM250S40.....		0		0	
23	ST		NICHT BESTUECKT							
1	ST	195027	QUARTZ 11 360KHz							

Stueck	ME	Identnr.	Bezeichnung	Lieferant	Lieferantenbezeichnung	Gesp.	Lager	IN	Lager	MLA
1	ST	191200	RCM* 10K 1%,10W0805S-8	Deut. Vitrohm	503-0 10K 1% TK100 V5.....		0		255000	
				First Resistor	CP-016 F 10K 100 TR8P50.....		0		255000	
				ROHM Electro.	MCR10 EZH FX103.....		0		255000	
				TAI Electronic	RM10 FT 103.....		0		255000	
13	ST	193696	RCM* 10K 5%,06W0603S-8	First Resistor	.....		0		35000	
				Philips Compon.	2322 702 60103.....		0		35000	
				ROHM Electro.	MCR03 EZH J103.....		0		35000	
				TAI Electronic	.....		0		35000	
5	ST	193624	RCM* 10R 5%,06W0603S-8	First Resistor	.....		0		0	
				Philips Compon.	2322 702 6010R.....		0		0	
				ROHM Electro.	MCR03 EZH J10R.....		0		0	
				TAI Electronic	.....		0		0	
1	ST	193402	RCM* 15K 1%,06W0603S-8	First Resistor	.....		0		0	
				Philips Compon.	2322 704 61503.....		0		0	
				ROHM Electro.	MCR03 EZH FW153.....		0		0	
				TAI Electronic	.....		0		0	
1	ST	191514	RCM* 15K 1%,10W0805S-8	Deut. Vitrohm	.....		0		0	
				Draloric Elec.	.....		0		0	
				First Resistor	.....		0		0	
				Panasonic GMBH	.....		0		0	
				ROHM Electro.	.....		0		0	
				TAI Electronic	.....		0		0	
1	ST	190679	RCM* 16R 5%,10W0805S-8	First Resistor	.....		0		0	
				ROHM Electro.	.....		0		0	
				TAI Electronic	.....		0		0	
1	ST	191403	RCM* 18K 1%,10W0805S-8	First Resistor	.....		0		11000	
				ROHM Electro.	.....		0		11000	
				TAI Electronic	.....		0		11000	
1	ST	193416	RCM* 21K 1%,06W0603S-8	First Resistor	.....		0		0	
				ROHM Electro.	.....		0		0	
				TAI Electronic	.....		0		0	
5	ST	193704	RCM* 22K 5%,06W0603S-8	First Resistor	.....		0		0	
				Philips Compon.	2322 702 60223.....		10000		15000	
				ROHM Electro.	MCR03 EZHWJ 223.....		10000		15000	
				TAI Electronic	.....		10000		15000	
3	ST	190691	RCM* 51R 5%,10W0805S-8	First Resistor	.....		10000		15000	
				ROHM Electro.	CP-016 J 51R 200 TR8P50.....		5000		0	
				TAI Electronic	MCR10 EZH (FZH)JW510.....		5000		0	
1	ST	190571	RCM* 100K 1%,10W0805S-8	Deut. Vitrohm	RM10 JT 510.....		5000		0	
				First Resistor	.....		0		165000	
				ROHM Electro.	.....		0		165000	
				TAI Electronic	.....		0		165000	
2	ST	193720	RCM* 100K 5%,06W0603S-8	First Resistor	.....		0		165000	
				Philips Compon.	.....		0		141000	
				ROHM Electro.	.....		0		141000	
				TAI Electronic	.....		0		141000	
18	ST	193648	RCM* 100R 5%,06W0603S-8	First Resistor	.....		0		141000	
				Philips Compon.	.....		0		80000	
				ROHM Electro.	.....		0		80000	
				TAI Electronic	.....		0		80000	
1	ST	190699	RCM* 120R 5%,10W0805S-8	First Resistor	.....		5000		0	
				ROHM Electro.	.....		5000		0	
				TAI Electronic	.....		5000		0	
5	ST	190701	RCM* 150R 5%,10W0805S-8	First Resistor	.....		0		0	
				ROHM Electro.	.....		0		0	
				TAI Electronic	.....		0		0	
5	ST	190146	RCM* 2,2K 5%,10W0805S-8	First Resistor	CP-016.....		5000		125000	
				Philips Compon.	.....		5000		125000	
				ROHM Electro.	MCR10 EZH (FZH)J222.....		5000		125000	
				TAI Electronic	.....		5000		125000	
1	ST	193510	RCM* 200K 1%,06W0603S-8	First Resistor	.....		0		0	
				ROHM Electro.	.....		0		0	
				TAI Electronic	.....		0		0	
1	ST	193658	RCM* 270R 5%,06W0603S-8	First Resistor	.....		0		0	
				Philips Compon.	.....		0		0	
				ROHM Electro.	.....		0		0	
				TAI Electronic	.....		0		0	
2	ST	192361	RCM* 3,3K 1%,13W0805S-8	Deut. Vitrohm	.....		0		0	
				First Resistor	.....		0		0	
				ROHM Electro.	.....		0		0	
				TAI Electronic	.....		0		0	
1	ST	193660	RCM* 330R 5%,06W0603S-8	First Resistor	.....		0		0	
				Philips Compon.	.....		10000		150000	
				ROHM Electro.	.....		10000		150000	
				TAI Electronic			10000		150000	
3	ST	193661	RCM* 360R 5%,06W0603S-8	First Resistor			10000		150000	
							0		0	

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TEG Geraete-Typ: ART01 SENSOR LP

Mengenuebersichts-Stueckliste fuer Produkt 2360ST

Seite: 3
Kundenbezeichnung:

Stueck ME Identnr.	Bezeichnung	Lieferant	Lieferantenbezeichnung	Gesp. Lager	IN Lager	MLA
3 ST 193661	RCM* 360R 5%,06W0603S-8	ROHM Electro.	.....	0	0	
1 ST 191491	RCM* 4,7K 1%,10W0805S-8	TAI Electronic	.....	0	0	
		First Resistor	.....	0	65000	
		ROHM Electro.	.....	0	65000	
1 ST 192593	RCM* 470R 1%,10W0805S-8	TAI Electronic	.....	0	65000	
		Deut. Vitrohm	.....	0	0	
		First Resistor	.....	0	0	
		ROHM Electro.	.....	0	0	
1 ST 193664	RCM* 470R 5%,06W0603S-8	TAI Electronic	.....	0	0	
		First Resistor	.....	0	35000	
		Philips Compon.	.....	0	35000	
		ROHM Electro.	.....	0	35000	
1 ST 192650	RCM* 750R 1%,10W0805S-8	TAI Electronic	.....	0	35000	
		First Resistor	.....	0	0	
		ROHM Electro.	.....	0	0	
5 ST 194392	RCM* 51R 1%,50W2010S-12	TAI Electronic	.....	0	0	
		Deut. Vitrohm	508-0 51R 1% V5.....	0	0	
		Draloric Elec.	CR2010 100 51R0 F B4.....	0	0	
3 ST 195390	RCM* 62R10%.25W1206S-8	ROHM Electro.	MCR50JZHUF51R0.....	0	0	
		Deut. Vitrohm	RGC 502-0.....	0	0	
		Endrich GMBH	CRA1206 62R +/-10%-TK50-GEGURTET....	0	0	
4 ST 195346	RCM* 300R10%.25W1206S-8	Philips Compon.	RC02TR.....	0	0	
		Deut. Vitrohm	RGC 502-0.....	0	0	
		Endrich GMBH	CRA1206 300R +/-10%-TK50-GEGURTET....	0	0	
1 ST 194387	TS *2N2219A TO-5 * *	Philips Compon.	RC02TR.....	0	0	
3 ST 190181	TSC*BC846B SOT23 S-8	Motorola GMBH	2N2219A.....	0	0	
		National Semi.	2N2219A / NICHT MEHR LIEFERBAR.....	0	0	
		General Instru.	BC846B.....	1010000	151184	
		Intermetall	BC846B.....	X 1010000	151184	
		Motorola GMBH	BC846BLT1.....	1010000	151184	
		Philips Compon.	BC846B.....	1010000	151184	
3 ST 190780	TSC*BSS123 SOT23 S-8	SGS Thomson	BC846B / NOT DELIVERY.....	1010000	151184	
1 ST 192700	TSC*SI9407DY* SO-8 S-8	Motorola GMBH	.....	0	0	
		Siemens AG	.....	0	0	
*** Ende der Stueckliste ***		TEMIC	SI9407DY.....	0	0	

ck ME Pos.	Identnr.	Ausf.	Bezeichnung	Bemerkung	LASPreis NT	Lieferant	Lieferantenbezeichnung	Gesp.
1 ST C101	190573		CKC*100N10% 50X7R S-80805		1.95	Kemet	C0805C104K5RAC	
1 ST C103	191306		CAC* 33U20% 25 BE-D S-12		-	TDK Electronics	C2012X7R1H104KT	
1 ST C104	190573		CKC*100N10% 50X7R S-80805		28.40	Vitramon GMBH	VJ0805Y104KXAT	
						Nichicon Corp.	UUT1E330MCR1GS	
					1.95	Panasonic GMBH	EEV HA 1E 330 P	
						Kemet	C0805C104K5RAC	
1 ST C110	191306		CAC* 33U20% 25 BE-D S-12		28.40	TDK Electronics	C2012X7R1H104KT	
						Vitramon GMBH	VJ0805Y104KXAT	
1 ST C111	191306		CAC* 33U20% 25 BE-D S-12		28.40	Nichicon Corp.	UUT1E330MCR1GS	
						Panasonic GMBH	EEV HA 1E 330 P	
1 ST C112	190573		CKC*100N10% 50X7R S-80805		28.40	Panasonic Corp.	UUT1E330MCR1GS	
					1.95	Panasonic GMBH	EEV HA 1E 330 P	
						Kemet	C0805C104K5RAC	
1 ST C113	190573		CKC*100N10% 50X7R S-80805		1.95	TDK Electronics	C2012X7R1H104KT	
						Vitramon GMBH	VJ0805Y104KXAT	
					1.95	Kemet	C0805C104K5RAC	
1 ST C121	191306		CAC* 33U20% 25 BE-D S-12		28.40	TDK Electronics	C2012X7R1H104KT	
						Vitramon GMBH	VJ0805Y104KXAT	
1 ST C122	190573		CKC*100N10% 50X7R S-80805		28.40	Nichicon Corp.	UUT1E330MCR1GS	
					1.95	Panasonic GMBH	EEV HA 1E 330 P	
						Kemet	C0805C104K5RAC	
1 ST C123	190573		CKC*100N10% 50X7R S-80805		1.95	TDK Electronics	C2012X7R1H104KT	
						Vitramon GMBH	VJ0805Y104KXAT	
					1.95	Kemet	C0805C104K5RAC	
1 ST C131	190573		CKC*100N10% 50X7R S-80805		1.95	TDK Electronics	C2012X7R1H104KT	
						Vitramon GMBH	VJ0805Y104KXAT	
					1.95	Kemet	C0805C104K5RAC	
1 ST C140	191306		CAC* 33U20% 25 BE-D S-12		28.40	TDK Electronics	C2012X7R1H104KT	
						Vitramon GMBH	VJ0805Y104KXAT	
1 ST C141	191306		CAC* 33U20% 25 BE-D S-12		28.40	Nichicon Corp.	UUT1E330MCR1GS	
					-	Panasonic GMBH	EEV HA 1E 330 P	
1 ST C142	190573		CKC*100N10% 50X7R S-80805		28.40	Nichicon Corp.	UUT1E330MCR1GS	
					1.95	Panasonic GMBH	EEV HA 1E 330 P	
						Kemet	C0805C104K5RAC	
1 ST C144	192251		CKC* 1U10% 16X7R S-81206		9.44	TDK Electronics	C2012X7R1H104KT	
						Vitramon GMBH	VJ0805Y104KXAT	
1 ST C151	191770		CKC*100P 5% 50NP0 S-80603		1.27	Kyocera	CM316 X7R 105K 16	
						TDK Electronics	C3216X7R1C105KT	
					1.27	Kemet		
1 ST C152	191770		CKC*100P 5% 50NP0 S-80603		1.27	ROHM Electro.	MCH185A101JK	
						TDK Electronics	C1608 CH 1H 101 JT	
					1.27	Kemet		
ST C153	191770		CKC*100P 5% 50NP0 S-80603		1.27	ROHM Electro.	MCH185A101JK	
						TDK Electronics	C1608 CH 1H 101 JT	
					1.27	Kemet		
ST C155	190573		CKC*100N10% 50X7R S-80805		1.95	ROHM Electro.	MCH185A101JK	
						TDK Electronics	C1608 CH 1H 101 JT	
						Kemet	C0805C104K5RAC	
						TDK Electronics	C2012X7R1H104KT	
						Vitramon GMBH	VJ0805Y104KXAT	

ck ME Pos.	Identnr.	Ausf.	Bezeichnung	Bemerkung	LASPreis NT	Lieferant	Lieferantenbezeichnung	Gesp.
1 ST	C156	192932	CKC* 10N10% 63x7R S-80603			Kemet	C0603C103K5RAC	
1 ST	C157	192932	CKC* 10N10% 63x7R S-80603			Murata Elek.	GRM39X7R103K50PT	
						TDK Electronics	C1608X7R1H103KT	
						Philips Compon.	2222 58616 627	
						Kemet	C0603C103K5RAC	
						TDK Electronics	C1608X7R1H103KT	
						Philips Compon.	2222 58616 627	
						Murata Elek.	GRM39X7R103K50PT	
						Kemet	C0805C471G5GAC	
						Murata Elek.	GRM40C0G471G50PT	
						TDK Electronics	C2012C0G1H471GT	
						Vitramon GMBH	VJ0805A471GXAT	
1 ST	C163	192996	CKC* 1N 2% 50NP0 S-80805		5.95	Kemet	C0805C102C5GAC	
1 ST	C164	190573	CKC* 100N10% 50x7R S-80805		1.95	TDK Electronics	C2012C0G1H102GT	
						Kemet	C0805C104K5RAC	
						Vitramon GMBH	VJ0805Y104KXAT	
1 ST	C171	190953	CKC* 22N10% 50x7R S-80805		.99	TDK Electronics	C2012X7R1H104KT	
1 ST	C201	190953	CKC* 22N10% 50x7R S-80805		.99	Kemet	C0805C223K5RAC	
1 ST	C202	190953	CKC* 22N10% 50x7R S-80805		.99	TDK Electronics	C2012X7R1H223KT	
1 ST	C203	190953	CKC* 22N10% 50x7R S-80805		.99	Kemet	C0805C223K5RAC	
1 ST	C204	190953	CKC* 22N10% 50x7R S-80805		.99	TDK Electronics	C2012X7R1H223KT	
1 ST	C205	190953	CKC* 22N10% 50x7R S-80805		.99	Kemet	C0805C223K5RAC	
1 ST	C206	190953	CKC* 22N10% 50x7R S-80805		.99	TDK Electronics	C2012X7R1H223KT	
1 ST	C207	190953	CKC* 22N10% 50x7R S-80805		.99	Kemet	C0805C223K5RAC	
1 ST	C208	190953	CKC* 22N10% 50x7R S-80805		.99	TDK Electronics	C2012X7R1H223KT	
1 ST	C209	190953	CKC* 22N10% 50x7R S-80805		.99	Kemet	C0805C223K5RAC	
1 ST	C210	190953	CKC* 22N10% 50x7R S-80805		.99	TDK Electronics	C2012X7R1H223KT	
1 ST	C211	191770	CKC* 100P 5% 50NP0 S-80603		1.27	Kemet	C0805C223K5RAC	
						ROHM Electro.	MCH185A101JK	
1 ST	C212	191770	CKC* 100P 5% 50NP0 S-80603		1.27	TDK Electronics	C1608 CH 1H 101 JT	
						Kemet		
1 ST	C213	191770	CKC* 100P 5% 50NP0 S-80603		1.27	ROHM Electro.	MCH185A101JK	
						TDK Electronics	C1608 CH 1H 101 JT	
						Kemet		
1 ST	C214	191770	CKC* 100P 5% 50NP0 S-80603		1.27	ROHM Electro.	MCH185A101JK	
						TDK Electronics	C1608 CH 1H 101 JT	
						Kemet		
						ROHM Electro.	MCH185A101JK	
						TDK Electronics	C1608 CH 1H 101 JT	
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						ROHM Electro.	MCH185A101JK	
						TDK Electronics	C1608 CH 1H 101 JT	
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						ROHM Electro.	MCH185A101JK	
						TDK Electronics	C1608 CH 1H 101 JT	
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						ROHM Electro.	MCH185A101JK	
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						ROHM Electro.	MCH185A101JK	
						TDK Electronics	C1608 CH 1H 101 JT	
						Kemet		
						ROHM Electro.</		

Stk ME Pos. Identnr. Ausf.	Bezeichnung	Bemerkung	LASPreis NT Lieferant	Lieferantenbezeichnung	Gesp.
1 ST C214 191770	CKC*100P 5% 50NP0 S-80603		1.27	TDK Electronics	C1608 CH 1H 101 JT
1 ST C215 191770	CKC*100P 5% 50NP0 S-80603		1.27	Kemet	
1 ST C216 191770	CKC*100P 5% 50NP0 S-80603		1.27	TDK Electronics	C1608 CH 1H 101 JT
				ROHM Electro.	MCH185A101JK
1 ST C223 192251	CKC* 1U10% 16x7R S-81206		9.44	ROHM Electro.	MCH185A101JK
1 ST C224 192251	CKC* 1U10% 16x7R S-81206		9.44	Kyocera	C1608 CH 1H 101 JT
1 ST C225 194285	CKC* 12P 5% 63NP0 S-80603		9.44	TDK Electronics	CM316 X7R 105K 16
				Kyocera	C3216X7R1C105KT
1 ST C226 194285	CKC* 12P 5% 63NP0 S-80603		1.27	TDK Electronics	CM316 X7R 105K 16
				Kemet	C3216X7R1C105KT
1 ST C227 194285	CKC* 12P 5% 63NP0 S-80603			TDK Electronics	
				Murata Elek.	
1 ST C228 192251	CKC* 1U10% 16x7R S-81206		9.44	Philips Compon.	2222 867 15129
1 ST C229 192251	CKC* 1U10% 16x7R S-81206		9.44	Philips Compon.	2222 867 15129
1 ST C230 191770	CKC*100P 5% 50NP0 S-80603		1.27	TDK Electronics	CM316 X7R 105K 16
				Kyocera	C3216X7R1C105KT
1 ST C231 194285	CKC* 12P 5% 63NP0 S-80603		1.27	TDK Electronics	CM316 X7R 105K 16
				Kemet	C3216X7R1C105KT
ST C232 191770	CKC*100P 5% 50NP0 S-80603		1.27	ROHM Electro.	MCH185A101JK
ST C233 192910	CKC* 1N10% 63x7R S-80603			TDK Electronics	C1608 CH 1H 101 JT
				Kemet	
ST C234 192910	CKC* 1N10% 63x7R S-80603		1.27	Philips Compon.	2222 867 15129
				Murata Elek.	
				TDK Electronics	
ST C235 194888	CKC* 1N10% 50COG S-80603			Kemet	
ST C236 194888	CKC* 1N10% 50COG S-80603			ROHM Electro.	MCH185A101JK
ST C237 191770	CKC*100P 5% 50NP0 S-80603		1.27	TDK Electronics	C1608 CH 1H 101 JT
				Kemet	
				Philips Compon.	2222 58616 614
				Murata Elek.	
				TDK Electronics	
				Philips Compon.	2222 58616 614
				Murata Elek.	
				AVX Ceramics	0603 5A 102 K AT2A
				AVX Ceramics	0603 5A 102 K AT2A
				Kemet	
				TDK Electronics	C1608 CH 1H 101 JT
				ROHM Electro.	MCH185A101JK

ckdatum: 28.09.98 15:16

Geräte-Typ: ART*SENSOR-SCH01

Entwickler-Stueckliste fuer ISTVANF . 236001

Seite: 4
Kundenbezeichnung:

Me Pos.	Identnr.	Ausf.	Bezeichnung	Bemerkung	LASPreis	NT	Lieferant	Lieferantenbezeichnung	Gesp.
1	ST C238	190573	CKC*100N10% 50X7R S-80805		1.95		Kemet	C0805C104K5RAC	
1	ST C239	191770	CKC*100P 5% 50NP0 S-80603		1.27		Vitramon GMBH TDK Electronics	VJ0805Y104KXAT C2012X7R1H104KT	
1	ST C240	190573	CKC*100N10% 50X7R S-80805		1.95		Kemet TDK Electronics ROHM Electro.	C1608 CH 1H 101 JT MCH185A101JK C0805C104K5RAC	
1	ST C241	191770	CKC*100P 5% 50NP0 S-80603		1.27		Kemet Vitramon GMBH TDK Electronics	VJ0805Y104KXAT C2012X7R1H104KT	
1	ST C242	190573	CKC*100N10% 50X7R S-80805		1.95		Kemet TDK Electronics ROHM Electro.	C1608 CH 1H 101 JT MCH185A101JK C0805C104K5RAC	
1	ST C243	191770	CKC*100P 5% 50NP0 S-80603		1.27		Kemet Vitramon GMBH TDK Electronics	VJ0805Y104KXAT C2012X7R1H104KT	
1	ST C244	190573	CKC*100N10% 50X7R S-80805		1.95		Kemet ROHM Electro.	MCH185A101JK	
1	ST C245	194766	CKC*2,2P *% 50COG S-80603 -55 C bis +125 C		1.95		Kemet TDK Electronics	C1608 CH 1H 101 JT C0805C104K5RAC	
1	ST C246	194285	CKC* 12P 5% 63NP0 S-80603				Vitramon GMBH TDK Electronics Murata Elek.	VJ0805Y104KXAT C2012X7R1H104KT GRM39COG2R2C50PT	
1	ST C247	194285	CKC* 12P 5% 63NP0 S-80603				Kemet Philips Compon. TDK Electronics Murata Elek.	C1608COG1H2R2CT C0603C229C5GAC 2222 867 15129	
1	ST C248	194888	CKC* 1N10% 50COG S-80603				Murata Elek. TDK Electronics	2222 867 15129	
1	ST C249	190573	CKC*100N10% 50X7R S-80805		1.95		Philips Compon. AVX Ceramics	0603 5A 102 K AT2A	
1	ST C250	191770	CKC*100P 5% 50NP0 S-80603		1.27		Kemet TDK Electronics Vitramon GMBH	C0805C104K5RAC C2012X7R1H104KT VJ0805Y104KXAT	
1	ST C303	192910	CKC* 1N10% 63X7R S-80603				Kemet TDK Electronics ROHM Electro.	C1608 CH 1H 101 JT MCH185A101JK	
1	ST C304	192910	CKC* 1N10% 63X7R S-80603				Kemet Murata Elek. TDK Electronics	2222 58616 614	
1	ST C305	191480	CTC* 10U20% 10 S-8TNT8		10.10		Philips Compon. Murata Elek.	2222 58616 614	
1	ST C306	190953	CKC* 22N10% 50X7R S-80805		.99		TDK Electronics Kemet Kemet TDK Electronics	T491B106K010AS C0805C223K5RAC C2012X7R1H223KT	

Me Pos.	Identnr.	Ausf.	Bezeichnung	Bemerkung	LASPreis	NT	Lieferant	Lieferantenbezeichnung	Gesp.
1	ST C307	190574	CKC* 22P 5% 63COG S-80805		.78		Kemet	C0805C220J5GAC	
1	ST C308	190574	CKC* 22P 5% 63COG S-80805				Siemens AG	B37940-K5220-J62	
							Philips Compon.	2222-861-15-229	
							TDK Electronics	C2012COG1H220JT	
					.78		Kemet	C0805C220J5GAC	
							Philips Compon.	2222-861-15-229	
							TDK Electronics	C2012COG1H220JT	
1	ST C309	190953	CKC* 22N10% 50X7R S-80805		.99		Siemens AG	B37940-K5220-J62	
1	ST C310	190953	CKC* 22N10% 50X7R S-80805		.99		Kemet	C0805C223K5RAC	
1	ST C313	192910	CKC* 1N10% 63X7R S-80603				TDK Electronics	C2012X7R1H223KT	
							TDK Electronics	C0805C223K5RAC	
							Kemet	C2012X7R1H223KT	
1	ST C314	192910	CKC* 1N10% 63X7R S-80603				Murata Elek.	2222 58616 614	
							Philips Compon.		
							TDK Electronics		
							Kemet		
1	ST C315	192910	CKC* 1N10% 63X7R S-80603				Murata Elek.	2222 58616 614	
							TDK Electronics		
							Philips Compon.		
							Kemet		
1	ST C316	192910	CKC* 1N10% 63X7R S-80603				Murata Elek.	2222 58616 614	
							TDK Electronics		
							Philips Compon.		
							Kemet		
1	ST C317	192910	CKC* 1N10% 63X7R S-80603				Murata Elek.	2222 58616 614	
							TDK Electronics		
							Philips Compon.		
							Kemet		
1	ST C318	192910	CKC* 1N10% 63X7R S-80603				Murata Elek.	2222 58616 614	
							TDK Electronics		
							Philips Compon.		
							Kemet		
1	ST C319	192910	CKC* 1N10% 63X7R S-80603				Murata Elek.	2222 58616 614	
							TDK Electronics		
							Philips Compon.		
							Kemet		
1	ST C320	192910	CKC* 1N10% 63X7R S-80603				Murata Elek.	2222 58616 614	
							Philips Compon.		
							TDK Electronics		
							Kemet		
1	ST C321	190953	CKC* 22N10% 50X7R S-80805				Murata Elek.	2222 58616 614	
							Philips Compon.		
							TDK Electronics		
1	ST C322	192910	CKC* 1N10% 63X7R S-80603		.99		Kemet	C0805C223K5RAC	
							TDK Electronics	C2012X7R1H223KT	
							Kemet		
							TDK Electronics		
							Philips Compon.		
							Murata Elek.	2222 58616 614	

Kdatum: 28.09.98 15:16

Geräte-Typ: ART*SENSOR-SCH01

Entwickler-Stueckliste fuer ISTVANF . 236001

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Kundenbezeichnung:

Beck ME Pos.	Identnr.	Ausf.	Bezeichnung	Bemerkung	LASPreis NT	Lieferant	Lieferantenbezeichnung	Gesp.
1 ST C323	192910		CKC* 1N10% 63X7R S-80603			Kemet		
1 ST C324	192910		CKC* 1N10% 63X7R S-80603			Philips Compon. Murata Elek. TDK Electronics Kemet Murata Elek. TDK Electronics Philips Compon. Kemet Philips Compon. Murata Elek. TDK Electronics	2222 58616 614	
1 ST C325	192910		CKC* 1N10% 63X7R S-80603			Kemet		
1 ST C351	190953		CKC* 22N10% 50X7R S-80805		.99	Kemet	C0805C223K5RAC	
1 ST C352	190573		CKC*100N10% 50X7R S-80805		1.95	TDK Electronics Kemet Vitramon GMBH TDK Electronics Kemet TDK Electronics Vitramon GMBH Kemet	C2012X7R1H223KT C0805C104K5RAC VJ0805Y104KXAT C2012X7R1H104KT C0805C104K5RAC C2012X7R1H104KT VJ0805Y104KXAT	
1 ST C353	190573		CKC*100N10% 50X7R S-80805		1.95	Kemet		
1 ST C354	192910		CKC* 1N10% 63X7R S-80603			Philips Compon. TDK Electronics Murata Elek. Kemet	2222 58616 614	
1 ST C355	190573		CKC*100N10% 50X7R S-80805		1.95	Kemet	C0805C104K5RAC VJ0805Y104KXAT	
1 ST C356	192251		CKC* 1U10% 16X7R S-81206		9.44	Vitramon GMBH TDK Electronics Kyocera TDK Electronics Kemet	C2012X7R1H104KT CM316 X7R 105K 16 C3216X7R1C105KT T494X476M020AS	
1 ST C357	195227		CTC* 47U20% 20 S-8TNT E			Siemens AG Motorola GMBH TEMIC Philips Compon. TEMIC	B45197-A4476-M50 P6SMB20AT3 BZT55C9V1 BZT55C5V1 TZM55C5V1	
1 ST D101	191070		DZC*P6SMB20* SMB S-8		24.96	Philips Compon.	BZT55C5V1	
1 ST D151	192492		DZC*BZT55C9V1 D0213 S-8		3.40	Philips Compon.	BZT55C5V1	
1 ST D152	191766		DZC*BZT55C5V1*00213 S-8		2.50	Philips Compon.	BZT55C5V1	
1 ST D153	191766		DZC*BZT55C5V1*00213 S-8		2.50	Philips Compon.	BZT55C5V1	
1 ST D235	190958		DSC*LS4148 D0213 S-8		1.50	TEMIC	LS4148	
1 ST D236	190958		DSC*LS4148 D0213 S-8		1.50	TEMIC	LS4148	
1 ST I111	194020		ICC*MC7805B02*D2PAK S-24		59.18	Motorola GMBH	MC7805BD2TR4	
1 ST I121	194020		ICC*MC7805B02*D2PAK S-24		59.18	Motorola GMBH	MC7805BD2TR4	
1 ST I141	192560		IC *LM2941S* T0263 S-24	-40 C / +125 C		National Semi.	LM2941S	
1 ST I151	192118		ICC*45ALS180* SO-14 S-14	-40 C bis +125 C		Texas Instrum.	SN65ALS1800	
1 ST I161	194360		ICC*74HCT4538*SO-16 S-16	-40 C bis +125 C		Harris Semicon.	CD74HCT4538M	
1 ST I201	194166		ICC*74ACT11000*SO-16 S-16	-40 C bis +85C		Philips Compon.	PC74HCT4538D	
1 ST I202	194343		ICC*74ACT11008*SO-16 S-16	-40 C bis +85C		Texas Instrum.	74ACT11000DR	
1 ST I203	194361		ICC*74ACT11000*SO-16 S-16	-40 C bis +85 C		Texas Instrum.	74ACT11000DR	

Stück ME Pos.	Identnr.	Ausf.	Bezeichnung	Bemerkung	LASPreis NT	Lieferant	Lieferantenbezeichnung	Gesp.
1 ST	I204	194361	ICC*74AC11000*SO-16 S-16	-40 C bis +85 C	-	Texas Instrum.	74AC11000DR	
1 ST	I205	194344	ICC*74AC11086*SO-16 S-16	-40 C bis +85C	-	Texas Instrum.	74AC11086DR	
1 ST	I206	194361	ICC*74AC11032*SO-16 S-16	-40 C bis +85C	-	Texas Instrum.	74AC11032DR	
1 ST	I207	194361	ICC*74AC11000*SO-16 S-16	-40 C bis +85 C	-	Texas Instrum.	74AC11000DR	
1 ST	I221	194168	ICC*74AC11244*SO-24 S-24	-40 C bis +85C	-	Texas Instrum.	74AC11244DR	
1 ST	I222	194168	ICC*74AC11244*SO-24 S-24	-40 C bis +85C	-	Texas Instrum.	74AC11244DR	
1 ST	I231	194218	ICC*8101312U *SO-20 S-24	-25 C bis +105 C	-	Atmel	B101312U	
1 ST	I231	195426	ICM*87C54-16* PROGRAM.	-40 C/ +125 C	-	EBV Elektronik	AN87C54-16 / SW = 2.1	
1 ST	I303	194190	ICC*LM75* SO-8 S-8	-55 C bis +125 C	125.76	National Semi.	LM75CLMX-5	
1 ST	I304	190918	IC *X24C08581 SO-8 S-8		24.79	Xicor GMBH		
1 ST	I305	190286	IC *74HC00 SO-14 S-16			Motorola GMBH	MC74HC00AD	
1 ST	I306	195564	IC *MAX810L* SOT23 S-8	-40C +105C		Philips Compon.	PC74HC00T	
1 ST	I351	194165	ICC*AD8402AR* SO-14 S-14	-40 C bis +85 C		Maxim GMBH	MAX810LEUR-T	
1 ST	I352	190260	ICC*LM2904M SO-8 S-8		22.00	Analog Devices	AD8402AR10	
1 ST	I101	194217	LSD*PLM250S40*SMD	-25 C bis +85 C		National Semi.	LM2904M	
1 ST	I102	194918	FHF*NFW41P11C* 4516S-12			Philips Compon.	LM2904D	
1 ST	I111	191343	LSD* 1U SIMID S-8			Murata Elek.	PLM250S40	
1 ST	I112	194918	FHF*NFW41P11C* 4516S-12		48.60	Murata Elek.	NFW41P11C204T1	
1 ST	I113	194918	FHF*NFW41P11C* 4516S-12			Siemens AG	B82432-A1102-M	
1 ST	I121	191343	LSD* 1U SIMID S-8			Murata Elek.	NFW41P11C204T1	
1 ST	I122	194918	FHF*NFW41P11C* 4516S-12		48.60	Siemens AG	B82432-A1102-M	
1 ST	I123	194918	FHF*NFW41P11C* 4516S-12			Murata Elek.	NFW41P11C204T1	
1 ST	I131	191343	LSD* 1U SIMID S-8			Siemens AG	B82432-A1102-M	
1 ST	I141	191343	LSD* 1U SIMID S-8			Murata Elek.	NFW41P11C204T1	
1 ST	I151	190895	LSD* 51U 0,5A S-12		48.60	Siemens AG	B82432-A1102-M	
1 ST	I231	194765	FHF*BLM11A601SPT S-12		48.60	Siemens AG	B82432-A1102-M	
1 ST	I232	194765	FHF*BLM11A601SPT S-12		59.00	Siemens AG	B82790-S0513-N201	
1 ST	I233	194765	FHF*BLM11A601SPT S-12			Murata Elek.	BLM11A601SPT	
1 ST	I234	194765	FHF*BLM11A601SPT S-12			Murata Elek.	BLM11A601SPT	
1 ST	Q301	195027	QUARZ* 11,260MHZ S-24	-40 C bis +125 C ; 100ppm		Murata Elek.	BLM11A601SPT	
1 ST	R131	193696	RCM* 10K 5%, 06W0603S-8		.28	Kinseki Europe	CP12A / 11,26 MHZ / 100PPM	
1 ST	R140	192650	RCM* 750R 1%, 10W0805S-8			First Resistor	CX5FW / 11,26 MHZ / 100PPM	
1 ST	R141	192361	RCM* 3,3K 1%, 13W0805S-8			TAI Electronic	MCR03 EZH J103	
1 ST	R142	193696	RCM* 10K 5%, 06W0603S-8		.75	ROHM Electro.	2322 702 60103	
1 ST	R143	193704	RCM* 22K 5%, 06W0603S-8		.28	Deut. Vitrohm		
1 ST	R143	193704	RCM* 22K 5%, 06W0603S-8		.28	TAI Electronic	2322 702 60103	
1 ST	R143	193704	RCM* 22K 5%, 06W0603S-8		.28	ROHM Electro.	MCR03 EZH J103	
1 ST	R143	193704	RCM* 22K 5%, 06W0603S-8		.28	First Resistor	2322 702 60103	
1 ST	R143	193704	RCM* 22K 5%, 06W0603S-8		.28	Philips Compon.	2322 702 60103	
1 ST	R143	193704	RCM* 22K 5%, 06W0603S-8		.28	ROHM Electro.	2322 702 60103	
1 ST	R143	193704	RCM* 22K 5%, 06W0603S-8		.28	TAI Electronic	2322 702 60103	
1 ST	R143	193704	RCM* 22K 5%, 06W0603S-8		.28	First Resistor	2322 702 60103	
1 ST	R143	193704	RCM* 22K 5%, 06W0603S-8		.28	Philips Compon.	2322 702 60103	

ck ME Pos.	Identnr.	Ausf.	Bezeichnung	Bemerkung	LASPreis	NT	Lieferant	Lieferantenbezeichnung	Gesp.
1	ST R162	190571	RCM* 100K 1%, 10W0805S-8		.74		Deut. Vitrohm ROHM Electro. TAI Electronic First Resistor Deut. Vitrohm Panasonic GMBH First Resistor Draloric Elec. ROHM Electro. TAI Electronic First Resistor TAI Electronic ROHM Electro. Philips Compon. First Resistor ROHM Electro. TAI Electronic		
1	ST R163	191514	RCM* 15K 1%, 10W0805S-8		.43				
1	ST R164	193624	RCM* 10R 5%, 06W0603S-8						
1	ST R165	191491	RCM* 4,7K 1%, 10W0805S-8		.74			MCR03 EZH J10R 2322 702 6010R	
1	ST R171		NICHT BESTUECKT						
1	ST R172		NICHT BESTUECKT						
1	ST R173		NICHT BESTUECKT						
1	ST R221	190701	RCM* 150R 5%, 10W0805S-8		.45		First Resistor TAI Electronic ROHM Electro. First Resistor ROHM Electro. TAI Electronic First Resistor ROHM Electro. TAI Electronic First Resistor ROHM Electro. TAI Electronic		
1	ST R222	190701	RCM* 150R 5%, 10W0805S-8		.45				
1	ST R223	190701	RCM* 150R 5%, 10W0805S-8		.45				
1	ST R224	190701	RCM* 150R 5%, 10W0805S-8		.45				
1	ST R225	193624	RCM* 10R 5%, 06W0603S-8						
1	ST R226	193624	RCM* 10R 5%, 06W0603S-8					MCR03 EZH J10R 2322 702 6010R	
1	ST R227	193624	RCM* 10R 5%, 06W0603S-8					2322 702 6010R	
1	ST R228	193696	RCM* 10K 5%, 06W0603S-8		.28			MCR03 EZH J10R 2322 702 6010R	
1	ST R229	193696	RCM* 10K 5%, 06W0603S-8		.28			2322 702 60103 MCR03 EZH J103 2322 702 60103	

ME Pos.	Identnr.	Ausf.	Bezeichnung	Bemerkung	LASPreis	NT	Lieferant	Lieferantenbezeichnung	Gesp.
ST R229	193696		RCM* 10K 5%,06W0603S-8		.28		TAI Electronic		
ST R230	193646		RCN* 300R10%,25W1206S-8	Tk-50 / Abgl.-Widerst. in Dicksch.Techn.	1.68		ROHM Electro. Deut. Vitrohm Endrich GmbH Philips Compon. First Resistor	MCR03 EZH J103 RGC 502-0 CRA1206 300R +/-10%-TK50-GEIGURTET RC02TR	
ST R231	193658		RCM* 270R 5%,06W0603S-8		.00		TAI Electronic ROHM Electro. Philips Compon. First Resistor		
ST R232	193624		RCM* 10R 5%,06W0603S-8				TAI Electronic ROHM Electro. Philips Compon. First Resistor		
ST R233	193648		RCM* 100R 5%,06W0603S-8		.00		TAI Electronic ROHM Electro. Philips Compon. First Resistor	MCR03 EZH J10R 2322 702 6010R	
ST R234	193648		RCM* 100R 5%,06W0603S-8		.00		TAI Electronic Philips Compon. ROHM Electro. First Resistor		
ST R235	190691		RCM* 51R 5%,10W0805S-8		.25		TAI Electronic Philips Compon. First Resistor	CP-016 J 51R 200 TR8P50 RM10 JT 510	
ST R236	190691		RCM* 51R 5%,10W0805S-8		.25		TAI Electronic ROHM Electro. First Resistor	MCR10 EZH (FZH)JW510 CP-016 J 51R 200 TR8P50	
ST R237	193660		RCM* 330R 5%,06W0603S-8		.28		TAI Electronic ROHM Electro. First Resistor	RM10 JT 510 MCR10 EZH (FZH)JW510	
ST R238	193664		RCM* 470R 5%,06W0603S-8		.28		Philips Compon. TAI Electronic ROHM Electro. First Resistor		
ST R240	190701		RCM* 150R 5%,10W0805S-8		.45		Philips Compon. First Resistor ROHM Electro. TAI Electronic		
ST R241	195390		RCN* 62R10%,25W1206S-8	Tk-50 / Abgl.-Widerst. in Dicksch.Techn.			Deut. Vitrohm Philips Compon. Endrich GmbH	RGC 502-0 RC02TR	
ST R242	195346		RCN* 300R10%,25W1206S-8	Tk-50 / Abgl.-Widerst. in Dicksch.Techn.	1.68		Deut. Vitrohm Philips Compon. Endrich GmbH	CRA1206 62R +/-10%-TK50-GEIGURTET RGC 502-0	
ST R243	195390		RCN* 62R10%,25W1206S-8	Tk-50 / Abgl.-Widerst. in Dicksch.Techn.			Deut. Vitrohm Philips Compon. Endrich GmbH	CRA1206 300R +/-10%-TK50-GEIGURTET RC02TR	
ST R244	195346		RCN* 300R10%,25W1206S-8	Tk-50 / Abgl.-Widerst. in Dicksch.Techn.	1.68		Deut. Vitrohm Philips Compon. Endrich GmbH	RGC 502-0 RC02TR	
							Endrich GmbH	CRA1206 62R +/-10%-TK50-GEIGURTET RGC 502-0	
							Endrich GmbH	RC02TR	
							Endrich GmbH	CRA1206 300R +/-10%-TK50-GEIGURTET	

k ME Pos.	Identnr. Ausf.	Bezeichnung	Bemerkung	LSPPreis NT	Lieferant	Lieferantenbezeichnung	Gesp.
1 1 ST R245	195390	RCM* 62R10%,25W1206S-8	TK-50 / Abgl.-Widerst. in Dicksch.Techn.		Deut. Vitrohm	RGC 502-0	
1 1 ST R246	195346	RCM* 300R10%,25W1206S-8	TK-50 / Abgl.-Widerst. in Dicksch.Techn.	1.68	Endrich GMBH Philips Compon.	CRA1206 62R +/-10%-TK50-GEGURTET RC02TR	
1 1 ST R248	190691	RCM* 51R 5%,10W0805S-8		.25	Deut. Vitrohm Endrich GMBH Philips Compon.	RGC 502-0 CRA1206 300R +/-10%-TK50-GEGURTET RC02TR	
1 1 ST R302	193704	RCM* 22K 5%,06W0603S-8		.28	First Resistor ROHM Electro. TAI Electronic	CP-016 J 51R 200 TR8P50 MCR10 EZH (FZH)JW510 RM10 JT 510	
1 1 ST R303	193648	RCM* 100R 5%,06W0603S-8		.00	First Resistor TAI Electronic ROHM Electro. Philips Compon.	MCR03 EZHUJ 223 2322 702 60223	
ST R304	193648	RCM* 100R 5%,06W0603S-8		.00	First Resistor Philips Compon. ROHM Electro. TAI Electronic		
ST R305	193704	RCM* 22K 5%,06W0603S-8		.28	First Resistor TAI Electronic Philips Compon.	MCR03 EZHUJ 223	
ST R306	193704	RCM* 22K 5%,06W0603S-8		.28	First Resistor Philips Compon. ROHM Electro.	2322 702 60223	
ST R307	193704	RCM* 22K 5%,06W0603S-8		.28	First Resistor TAI Electronic ROHM Electro.	2322 702 60223 MCR03 EZHUJ 223	
ST R308	190146	RCM* 2,2K 5%,10W0805S-8		.36	First Resistor ROHM Electro. TAI Electronic Philips Compon.	MCR03 EZHUJ 223 2322 702 60223 CP-016...	
ST R309	190146	RCM* 2,2K 5%,10W0805S-8		.36	First Resistor Philips Compon. ROHM Electro. TAI Electronic	MCR10 EZH (FZH)J222 CP-016...	
ST R310	190146	RCM* 2,2K 5%,10W0805S-8		.36	First Resistor TAI Electronic ROHM Electro. Philips Compon.	MCR10 EZH (FZH)J222 CP-016...	
ST R314	193648	RCM* 100R 5%,06W0603S-8		.00	First Resistor Philips Compon. ROHM Electro.	MCR10 EZH (FZH)J222	
ST R315	193648	RCM* 100R 5%,06W0603S-8		.00	First Resistor Philips Compon. TAI Electronic		

Stück ME Pos.	Identnr.	Ausf.	Bezeichnung	Bemerkung	LASPreis NT	Lieferant	Lieferantenbezeichnung	Gesp.
1 ST R327	193648		RCM* 100R 5%,06W0603S-8		.00	Philips Compon.		
1 ST R328	193648		RCM* 100R 5%,06W0603S-8		.00	First Resistor		
						Philips Compon.		
						TAI Electronic		
						ROHM Electro.		
1 ST R330	193696		RCM* 10K 5%,06W0603S-8		.28	First Resistor	2322 702 60103	
						Philips Compon.		
						TAI Electronic		
1 ST R331	193696		RCM* 10K 5%,06W0603S-8		.28	ROHM Electro.	MCR03 EZH J103	
						First Resistor		
1 ST R332	193696		RCM* 10K 5%,06W0603S-8		.28	Philips Compon.	2322 702 60103	
						TAI Electronic		
						ROHM Electro.	MCR03 EZH J103	
						First Resistor		
1 ST R333	193696		RCM* 10K 5%,06W0603S-8		.28	TAI Electronic		
						ROHM Electro.	MCR03 EZH J103	
						Philips Compon.	2322 702 60103	
						First Resistor		
1 ST R351	193510		RCM* 200K 1%,06W0603S-8		.28	Philips Compon.	2322 702 60103	
						TAI Electronic		
						ROHM Electro.	MCR03 EZH J103	
						First Resistor		
1 ST R352	193402		RCM* 15K 1%,06W0603S-8			TAI Electronic		
						ROHM Electro.		
						Philips Compon.		
1 ST R353	193648		RCM* 100R 5%,06W0603S-8		.00	Philips Compon.	MCR03 EZH FW153	
						First Resistor	2322 704 61503	
						TAI Electronic		
						ROHM Electro.		
1 ST R354	191200		RCM* 10K 1%,10W0805S-8		.43	Philips Compon.		
						Deut. Vitrohm	503-0 10K 1% TK100 V5	
						ROHM Electro.	MCR10 EZH FX103	
1 ST R355	191403		RCM* 18K 1%,10W0805S-8		.43	TAI Electronic	RM10 FT 103	
						First Resistor	CP-016 F 10K 100 TR8P50	
1 ST R356	193416		RCM* 21K 1%,06W0603S-8			First Resistor		
						TAI Electronic		
						ROHM Electro.		
1 ST R357			NICHT BESTUECKT					
1 ST R358	193648		RCM* 100R 5%,06W0603S-8					
1 ST R359	194392		RCM* 51R 1%,50W2010S-12		.00	First Resistor		
						Philips Compon.		
						ROHM Electro.		
						TAI Electronic		
						Deut. Vitrohm	508-0 51R 1% V5	
						Dratoric Elec.	CR2010 100 51R0 F B4	
						ROHM Electro.	MCR50JZHUFX51R0	

ME Pos. Identnr. Ausf.	Bezeichnung	Bemerkung	LASPreis NT Lieferant	Lieferantenbezeichnung	Gesp.	
ST R360 194392	RCN* 51R 1%, 50W2010S-12			Deut. Vitrohm Draloric Elec. ROHM Electro. Deut. Vitrohm Draloric Elec. ROHM Electro. Deut. Vitrohm ROHM Electro. Draloric Elec. Deut. Vitrohm Draloric Elec. ROHM Electro. First Resistor TAI Electronic ROHM Electro.	508-0 51R 1% V5 CR2010 100 51R0 F B4 MCR50JZHUF51R0 508-0 51R 1% V5 CR2010 100 51R0 F B4 MCR50JZHUF51R0 508-0 51R 1% V5 MCR50JZHUF51R0 CR2010 100 51R0 F B4 508-0 51R 1% V5 CR2010 100 51R0 F B4 CR2010 100 51R0 F B4 MCR50JZHUF51R0	
ST R361 194392	RCN* 51R 1%, 50W2010S-12		2.71	TEMIC General Instru. Philips Compon. Motorola GMBH	S19407DY BC8468 BC8468 BC8468LT1	
ST R362 194392	RCN* 51R 1%, 50W2010S-12		33.09	SGS Thomson Intermetall Motorola GMBH	BC8468 / NOT DELIVERY BC8468 Motorola GMBH	X
ST R363 194392	RCN* 51R 1%, 50W2010S-12		33.09	Siemens AG Motorola GMBH	33.09 Motorola GMBH	
ST R364 190679	RCM* 16R 5%, 10W0805S-8		33.09	Siemens AG Motorola GMBH	33.09 Motorola GMBH	
ST R366	NICHT BESTUECKT		2.71	Siemens AG General Instru. Intermetall Motorola GMBH	2.71 General Instru. Intermetall Motorola GMBH	
ST T131 192700	TSC*S194070V* SO-8 S-8			Philips Compon. SGS Thomson General Instru. Intermetall Motorola GMBH Philips Compon. SGS Thomson Motorola GMBH National Semi.	BC8468 BC8468 BC8468LT1 BC8468 BC8468 / NOT DELIVERY BC8468 BC8468 BC8468LT1 BC8468 2N2219A / NOT DELIVERY 2N2219A / NICHT MEHR LIEFERBAR	
ST T141 190181	TSC*BC8468 SOT23 S-8			AMP AMP AMP AMP	50462-7 50462-7 50462-7 50462-7	
ST T142 190780	TSC*BSS123 SOT23 S-8					
ST T151 190780	TSC*BSS123 SOT23 S-8					
ST T152 190780	TSC*BSS123 SOT23 S-8					
ST T153 190181	TSC*BC8468 SOT23 S-8					
ST T154 190181	TSC*BC8468 SOT23 S-8					
ST T351 194387	TS *2N2219A TO-5 * *					
ST X101	NICHT BESTUECKT					
ST X110 195307	BUCHSE					
ST X111 195307	BUCHSE					
ST X210 195307	BUCHSE					
ST X211 195307	BUCHSE					
ST Z053	NICHT BESTUECKT					
ST Z079	NICHT BESTUECKT					
ST Z081	NICHT BESTUECKT					
ST Z102	NICHT BESTUECKT					
ST Z107	NICHT BESTUECKT					

datum: 28.09.98 15:16
seraete-Typ: ART*SENSOR-SCH01

Entwickler-Stueckliste fuer ISTVANF . 236001

Seite: 15
Kundenbezeichnung:

Stück	ME	Pos.	Identnr.	Ausf.	Bezeichnung	Bemerkung	LASPreis	NT	Lieferant	Lieferantenbezeichnung	Gesp.
1	ST	Z110			NICHT BESTUECKT						
1	ST	Z124			NICHT BESTUECKT						
1	ST	Z200			NICHT BESTUECKT						
1	ST	Z300			NICHT BESTUECKT						
1	ST	Z301			NICHT BESTUECKT						
1	ST	Z302			NICHT BESTUECKT						
1	ST	Z303			NICHT BESTUECKT						
1	ST	Z304			NICHT BESTUECKT						
1	ST	Z305			NICHT BESTUECKT						
1	ST	Z306			NICHT BESTUECKT						
1	ST	Z307			NICHT BESTUECKT						

ende der Stueckliste ***

450 Bauteil(e)

Plot Sheet 