Advanced HCMOS Microcontrollers (continued)

68331 and 68332, 32-Bit Advanced Microcontrollers

Mfr.'s Type		ROM (Bytes)	RAM (Bytes)	EEPROM (Bytes)	Timer	Serial	ADC	I/O	Clock Speed (MHz)	Modes	Operating Voltage (V)	Comments	Temperature Range (°C)	No. of Leads
TQFP	PQFP													
—	MC68331CFC16	0	0	0	3 or 4 IC, 4 or 5 OC, 2 PWM, PIT, WDOG	QSPI, SCI	No	43	0 to 20.97	External Bus, Background Debug	4.5 to 5.5	External Bus, 12 Chip Selects, Synthesized Clock	–40 to +85	132
—	MC68332ACFC16	0	2 K	0	16 Channel Programmable TPU, PIT, WDOG	QSPI, SCI	No	47	0 to 20.97	External Bus, Background Debug	4.5 to 5.5	External Bus, 12 Chip Selects, Synthesized Clock	–40 to +85	132

ADC=8/10-Bit Analog to Digital Converter Module. PIT=Programmable Interrupt Timer. IC=Input Capture. OC=Output Capture. PWM=Pulse Width Modulation. SCI=Serial Communication Interface.TPU=Time Processing Unit. DMA=Direct Memory Access. QSPI=Queued SPI. WDOG=Watchdog Timer.

Phase-Locked Loop Frequency Synthesizers

Mfr.'s Type		Description	Frequency (MHz)	Supply Voltage (V)	Nominal Supply Current (mA)	Phase Detector	Standby	Interface	No. of Leads
PDIP	SOG								
MC145151P2	MC145151DW2	Parallel Input PLL Synthesizer	20 @ 5 V	3.0 to 9.0	7.5 @ 5 V	Single-Ended 3-State, Double-Ended	No	Parallel Input, Single Modulus	28
MC145152P2	—	Parallel Input PLL Synthesizer	20 @ 5 V	3.0 to 9.0	7.5 @ 5 V	Double-Ended	No	Parallel Input, Dual Modulus	28
MC145157P2	MC145157DW2	Serial Input PLL Synthesizer	20 @ 5 V	3.0 to 9.0	7.5 @ 5 V	Single-Ended 3-State, Double-Ended	No	Serial Input, Single Modulus	16

Remote Control Integrated Circuits

Mfr.'s Type		Function	Number of Address Lines	Maximum No. of Address Codes	Number of Data Bits	Operation	No. of Leads
PDIP	SOG						
MC145026P	MC145026D	Encoder	Depends On Decoder	Depends On Decoder	Depends On Decoder	Simplex	16
MC145027P	—	Decoder	5	243	4	Simplex	16

Line Drivers

EIA-232-E and CCITT V.28 CMOS Drivers/Receivers

Mfr.'s Type		No of Drivers	No of Receivers	Power Supplies (V)	Features	No. of Leads
PDIP	SOG					
MC145406P	MC145406DW	3	3	±5.0 to ±12	EIA-232-E and CCITT V.28 (Formerly RS-232-D)	16
MC145407P	MC145407DW	3	3	5.0	EIA-232-E and CCITT V.28 (Formerly RS-232-D), +5 V to ±10 V Charge Pump Architecture	20

RF Communications

Wideband Single Conversion Receivers — VHF

Mfr.'s Type	V_{CC} (V)	I_{CC} (mA)	Sensitivity Typ. (µV)	RF Input (MHz)	IF (MHz)	Mute	RSSI	Max. Data Rate	Notes	No. of Leads
SOIC										
MC3356DW	3 to 9	25	30	200	10.7	Yes	Yes	500 Kb	Includes Front End Mixer/L.O.	20

Narrowband Single Conversion Receivers — VHF

Mfr.'s Type	V_{CC} (V)	I_{CC} (mA)	12 dB SINAD Sensitivity Typ. (µV)	RF Input (MHz)	IF (KHz)	Mute	RSSI	Max. Data Rate	Notes	No. of Leads
SOIC										
MC3371D	2 to 8	6	1	60	455	Yes	Yes	>4.8 Kb	RSSI	16
MC3372D	2 to 8	6	1	60	455	Yes	Yes	>4.8 Kb	RSSI, Ceramic Quad Detect./Resonator	16

Narrowband Dual Conversion Receivers — FM/FSK — VHF

Mfr.'s Type	V_{CC} (V)	I_{CC} (mA)	12 dB SINAD Sensitivity Typ. (µV)	RF Input (MHz)	IF1 (MHz)	IF2 (Limiter In) (KHz)	Mute	RSSI	Max. Data Rate	Notes	No. of Leads
SOIC											
MC13135DW	2 to 7	3.5	0.7	200	10.7	455	—	Yes	>50.0 Kb	Voltage Buffered RSSI	24

Transmitters — AM/FM/FSK

Mfr.'s Type	V_{CC} (V)	I_{CC} (mA)	P_{OUT} (dBm)	Max. RF Frequency Out	Max. Mod. Frequency	Notes	No. of Leads
SOIC							
MC13176D	2 to 5	40	8	1 GHz	5 MHz	AM/FM Transmitter. Single Frequency PLL fout = 32 × fref	16

Data Conversion

Digital to Analog Converters

CMOS

Mfr.'s Type	Resolution (Bits)	Accuracy @ 25 °C Max.	Max Settling Time (±1/2 LSB)	Supplies (V)	Comments	No. of Leads
PDIP						
MC144111P	6	—	—	+5.0 to +18	Serial Input, Quad DAC, 4 Outputs	14/16

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