

TLCS-48 Series (CMOS)

X44

Type No.	Function	ROM (byte)	RAM (bit)	I/O Port (bit)	Min. Inst. Execu- tion Time (μs)	Supply Voltage (V)	Max. Supply Current (mA)	Operating Temperature (°C)	No. of Pins	
									P	U
TMP80C48AP-6/AU-6 (TMP80C35AP-6)	i80C48 equivalent	(1K External 4K)	64	27 (19)	2.5	4.0-6.0	10<0.01>	-40~85	40	44
TMP80C48AP/AU (TMP80C35AP)					1.36	4.5-5.5	15<0.01>			
TMP80C49AP-6/AU-6 (TMP80C39AP-6)	i80C49 equivalent	(2K External 4K)	128		2.5	4.0-6.0	10<0.01>			
TMP80C49AP/AU (TMP80C39AP)					1.36	4.5-5.5	15<0.01>			
TMP80C50AP-6/AU-6 (TMP80C40AP-6)	i80C50 equivalent	(4K External 4K)	256		2.5	4.0-6.0	10<0.01>			
TMP80C50AP/AU (TMP80C40AP)					1.36	4.5-5.5	15<0.01>			
TMP82C43P	i82C43 equivalent	I/O Exapnder				4.0-6.0	2			

Note) Postfix P: Plastic standard DIP (DIP), U: Plastic micro flat package (μFP), < >: Holding current, (): In case of using external ROM.

TLCS-90 Series (CMOS)

X44

Type No.	Function		ROM (byte)	RAM (byte)	I/O Port (byte)	Min. Inst. Execu- tion Time (μs)	Operating Tem- perature (°C)	Package	One-time PROM
TMP90C840AN/AF	A/D converter: 8-bit x 6ch Timer counter: 16-bit x 1ch (Capture/PPG) Timer: 8-bit x 4ch (PWM/PPG) Serial: 1ch (enhanced UART and I/O) Stepping motor control port Watchdog timer Micro-DMA function Program memory: 64K byte Data memory: 1M byte		8K	256	54	(Note 1) 320	-20~70	SDIP6 QFP64	TMP91P640E-10/N-10 (BM1115A) TMP91P640F-10 (BM1116A)
TMP90C841AN/AF			—		28				
TMP91C640N/F			16K	512	54				
TMP91C641N/F			—		28				
TMP90CM40N/F			32K	1K	54	0~60	—		
TMP90C041N/F-15			—	—	28				267
TMP90C041N/F									320
TMP90C041AN/AF									250
TMP90C141N/F									320
**TMP90C441N/F			4K	250					
TMP90C802AP/AM	Timer counter: 8-bit x 4ch Serial: 1ch Program/Data memory: 64K byte		8K	256	32	(Note 1) 320	DIP40 SOP40	TMP90P802AP/AM (BM1158/BM1159)	
TMP90C803AP/AM			—		6				
TMP90CH02P/M			16K	512	32	256		*TMP90PH02P/M	
TMP90CH03P/M			—		6				
TMP90C400N/F	Timer counter: 8-bit x 4ch Serial: 1ch 22 programmable pull-up port Program/Data memory: 64K byte		4K	128	56	(Note 1) 320	-20~70	SDIP64 QFP64	TMP90P800N/F (BM1142/BM1147)
TMP90C401N/F			—		38				
TMP90C800N/F			8K		56				
TMP90C801N/F			—		38				
TMP90C844N/F	Slave bus function. 90C840A With enhanced I/O		8K	512	54	250		TMP90PH44N/F (BM1148/BM1149)	
**TMP90C844AN/AF			16K						
TMP90CH44N/F	90084A with enhanced I/O (expanded external memory) Program area: 4M byte, Data area: 8M byte		—	256	38			—	
TMP90C845N/F									512
**TMP90C845AN/AF									
TMP90CH45N/F									
**TMP90CM36F/T	A/D converter: 8 bit x 8ch 8-bit timer: 4ch 16-bit timer: 1ch Hardware standby Watchdog timer	D/A converter: 8-bit x 2ch Serial: 4ch, TBC/TPG Serial: 2ch Pattern generator: 2ch	32K	1K	64		MFP80 PLCC80	*TMP90PM36F/T	
*TMP90CM37F/T			—		—				
TMP90CM38F/T			32K		66			TMP90PM38F/T	
TMP90CM39F/T			—						
TMP91C642AN/AF	VCR servo VCR dedicated		16K	320	54	400	QFP80 14 x 20 22 x 22	*TMP90PM42F/DF (BM1154/BM1151)	
TMP90CH42F/DF			24K	640	72	320			
TMP90CK42F/DF									
TMP90C846F	Flash A/D converter: 8-bit x 2ch D/A converter: 8-bit x 2ch Timer: 8-bit x 4ch, 16-bit x 1ch		8K	256	28	400	MFP44	TMP90P846F	
TMP90C051F	High-speed micro DMA, RTC, MMU built in DRAM controller, TPH controller		—	—	31	250	QFP80	—	
TMP90C848F	8-bit PWM: 8ch Flash A/D converter: 8-bit x 16ch Dual clock system		8K	512	62	400		TMP90PH48F (BM1153)	

*: Samples available **: Under development

Note) Operating temperature: Minimum instruction execution time 320ns at -20~70°C and 400ns at -40~85°C guaranteed.

Postfix — P: Plastic standard dual in-line package (DIP), F: Plastic flat package (QFP), N: Plastic shrink dual in-line package (SDIP), D: Ceramic standard dual in-line package (DIC), T: Plastic leaded chip carrier (PLCC), E: Ceramic standard dual in-line package (SDIC).