億而得微電子股份有限公司

Yield Microelectronics Corp.

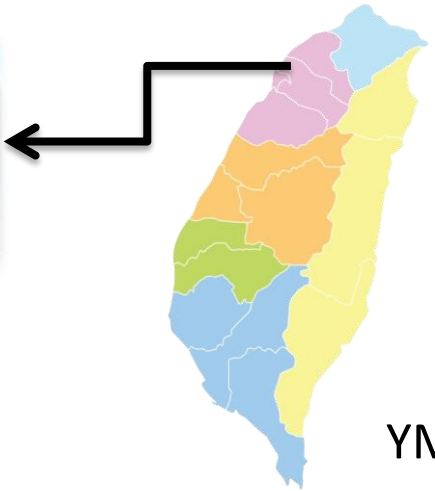
IP List

Contents

Company Profile

Embedded non-volatile memory

- Established in Sep 4, 2001
- Located in Chu-Pei City, Taiwan.
- Capital of 8.8 million US dollars
- 50 Employees



Complete patents:

11 patents issued in USA

17 patents issued in Taiwan

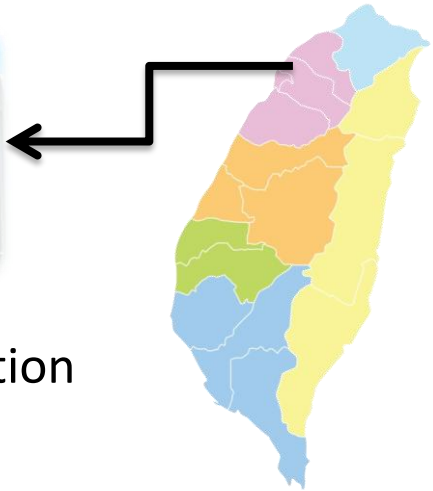
8 patents issued in China

YMC Licenses its proprietary technology to semiconductor foundries, integrated device manufacturers (IDM) and fabless design houses around the world.

Company Profile

- 2012 tsmc cell license
- 2014 Toshiba cell license
- 2016 VIS cell license

- IP verified: 300+
- Process verified: 200+
- Customers : 200+
- Productions wafer : 600,000+



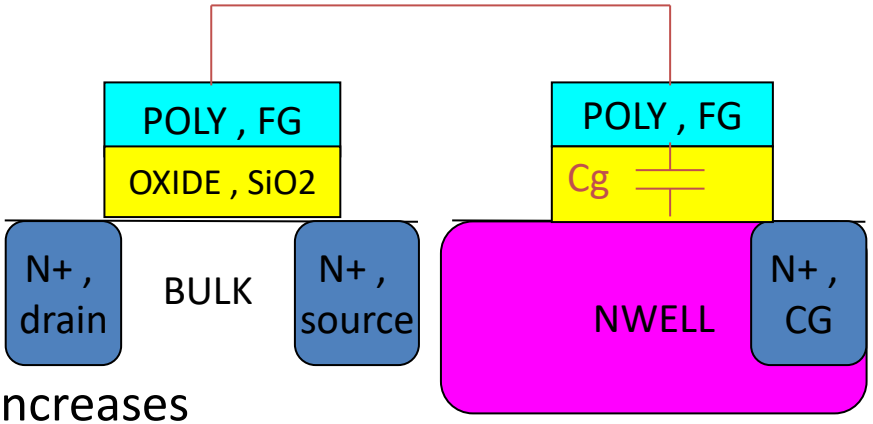
Foundry in Production

- Singapore : GF
- Korea : Magnachip
- Japan : Toshiba, Lapis
- China : HG、SMIC 、HJTC、Nexchip
- Taiwan : tsmc、VIS、UMC、Powerchip、Maxchip,、MXIC、Nuvoton

YMC technology brief

Cell structure

1T1C Architecture = NMOS + N Capacitor



FG: floating gate

Erase mode

- Band to Band Hot Hole Injection
- Hole stored in floating gate increased and Vth dropped, source- drain current increases

Program mode

- Hot Carrier Injection
- Hole stored in floating gate reduced and Vth increased, source- drain current reduces.

Read mode

- The charge stored in the floating gate should impact the NMOS Vt.
- The NMOS Vt should decide the cell current value.
- sensor the cell current to judge the data is “0” or “1” status.

Things to be known before reading (1/2)

1.The Density of EEPROM and Information block can be added or reduced.

2. The meanings of IP status

- **"Available"** means the IPs have been qualified.
- **"Under Qualification"** means the IPs have characterization report, are in the process of reliability test and wait for Qualification report.
- **"Under Verification"** means the IPs are under the verification test and wait for Characterization report.
- **"Under Development"** means the IPs are still in the design phase or wait for wafer out.
- **"Customized IP"** means the IPs can be used by specific customer.

Things to be known before reading (2/2)

3. The meanings of the information in the column “special feature”
   - “125C” indicates the IP supports retention at 125°C 10yrs, and so on. The default IP supports retention at 85°C 10 yrs.
   - “ECC” indicates the IP supports error correction code.
   - “Diff” indicates the IP uses differential layout.
   - “ISO” indicates the IP is w/ isolated layout and allows customers to connect bias negative volt with P-sub.
   - “+N mask” ” indicates the IP needs to add N extra mask
4. The meanings of the information in the column “Schedule”
   - “W/O” indicates wafer out.
   - “T/O” indicates tape out.
   - “CZ” indicates characterization test.
   - “Qual” indicates qualified/qualification.

YMC IP List in GLOBALFOUNDRIES

Available

Process	Read Access Time(max.) Read(V) Write(/EE)(V)	Mask layers Metal/Metal thickness (X um)*(Y um)=(mm2)	Density MTP(+EE) Product name	Special Feature
0.18um 5V	60ns@4.5V-5.5V	16masks 3M,9KA (390)*(922)=0.36	4K*16/8K*8 YUF4K16F18L5BP1_Y10	
	1.8V-5.5V			
	4.5V-5.5V			
0.18um 5V	60ns@4.5V-5.5V	16masks 3M,9KA (685)*(1230)=0.843	8K*16/16K*8(+256*8) YEG8K16F18L5BP1_Y10	125C
	1.8-5.5			
	4.5-5.5(/2.6-5.5)			
0.18um 3.3V	60ns. @4.5V-5.5V	14 masks 3M,9KA (563)*(919.4)=0.518	8K16/16K8 (+128*8) YEG8K16F18L3BA1_Y10	
	1.8-3.6			
	2.5-3.6			
0.18um BCDLite 40V-65V	60ns	4M (692)*(2047)=1.417	8K32/32K8(+128*8) YEG32K08F18B5AA1	125C
	1.62-1.98 / 3.0-5.5			
	1.62-1.98 / 3.0-5.5			

Under Qualification

Process	Read Access Time(max.) Read(V) Write(/EE)(V)	Mask layers Metal/Metal thickness (X um)*(Y um)=(mm2)	Density MTP(+EE) Product name	Special Feature	Schedule
0.18um BCDLite 10V-30V	60ns@4.5V-5.5V 1.62-1.98 / 3.0-5.5 1.62-1.98/ 3.0-5.5	+1 mask (692)*(2047)=1.417	8K32/32K8(+128*8) YEG32K08F18B5AA1	125C; F3E	1st Qual lot 7/B finish; 2nd 3rdlot Q3 finish
0.18um BCDLite 10V-30V	60ns(/60ns) 2.5-5.5 4.5-5.5(/2.5-5.5)	+1 mask 3M (685)*(2762)=1.89	16K16/32K8(+128*8) YEE16K16F18B5BA1	125C	1st Qual lot pass 2nd 3rdlot Q3 finish
0.15um MCU 5V	60ns 1.8-5.0 4.5-5.5	+1 mask 3M, 11KA (346)*(1253)=0.43	4K*16(+128*8) YEG4K16F15L5BA1	125C	1st Qual lot 8/E finish
0.15um MCU 3.3V	60ns 1.8-3.6 2.5-3.6	+1 mask 3M (574)*(1193)=0.685	16K*16(+128*8) YEE16K16F15L3BA1		1st Qual lot 7/B finish

Under Development

Process	Read Access Time(max.) Read(V) Write(/EE)(V)	Mask layers Metal/Metal thickness (X um)*(Y um)=(mm2)	Density MTP(+EE) Product name	Special Feature	Schedule
0.11um TS 1.2/3.3V	40ns(/40ns) 1.1-1.3/2.5-3.6 1.1-1.3/2.5-3.6	+1 mask 4M, 8KA TBD	16K32(+256*8) YEE16K32F11M3BA1	ECC	To be scheduled
0.13um BCD 1.5/5V	37ns 1.45-1.65 /4.75-5.5 1.45-1.65 /4.75-5.5	+1 mask 4M, 8KA (695)*(2307)=1.603	8k*32 YEN8K32F13B5BA1	125C	To be scheduled
0.15um MCU 5V			4K*16	GIV tech	To be scheduled

Customized IP

Process	Read Access Time(max.) Read(V) Write(/EE)(V)	Mask layers Metal/Metal thickness (X um)*(Y um)=(mm2)	Density MTP(+EE) Product name	Special Feature
0.18um MCU 3.3V	60ns	14 masks 3M, 9KA (309)*(689)=0.213	4K16/8K8 YUN4K16F18L3BA1	
	1.8-3.6			
	2.5-3.6			

YMC IP List in MagnaChip

Available

Process	Read Access Time(max.) Read(V) Write(/EE)(V)	Mask layers Metal/Metal thickness (X um)*(Y um)=(mm2)	Density MTP(+EE) Product name	Special Feature
0.13um Logic 1.2/3.3V HL13G	1us	+0 mask 3M, 8KA (198.5)*(230)=0.045	40*8 YEN4008N13L3AA2	
	1.6-3.6			
	2.4-3.6			
0.13um Logic 1.2/3.3V HL13G	1us	+0 mask 3M (198.5)*(300)=0.06	128*8 YEN12808N13L3AA2	125C
	1.6-3.6			
	2.4-3.6			

Available

Process	Read Access Time(max.) Read(V) Write(/EE)(V)	Mask layers Metal/Metal thickness (X um)*(Y um)=(mm2)	Density MTP(+EE) Product name	Special Feature
0.18um Logic 1.8/3.3V	200ns 2.7-3.6 2.7-3.6	+1mask (325)*(492)=0.16	64*8 YE6408N18L3AC2	
0.18um Logic 5V HL18GFL	120ns 2.2-5.5 3.7-5.5	+2mask 3M (700)*(1065)=0.746	8K*16 YU8K16N18L5AA1	
0.18um Logic 5V HL18GFL	170ns 2.2-5.5 3.7-5.5	+2mask (700)*(483)=0.338	2K*14 YU2K14N18L5AA1	
0.18um Logic 5V HL18GFL	60ns 2.6-5.5 4.5-5.5	(17+1)masks 3M (375)*(904)=0.339	4K*16 YUF4K16N18L5BA1	
0.18um Logic 3.3V HL16GF	220ns 2.5-3.6 3.0-3.6	+1 mask 3M (907)*(421)=0.381	256*8 YEN25608N18L3AE2	125C; Diff; ECC

Available

Process	Read Access Time(max.) Read(V) Write(/EE)(V)	Mask layers Metal/Metal thickness (X um)*(Y um)=(mm2)	Density MTP(+EE) Product name	Special Feature
0.18um BCD 1.8/5/80V HP18E80	300ns 2-5.5 4.5-5.5	+1mask (495)*(1271)=0.63	2K*8 YE2K08N18B5BA2	125C
0.18um BCD 1.8/5/80V HP18E80	1us 2-5.5 2.5-5.5	+1mask 3M (235)*(940)=0.221	128*8 YE12808N18B5AA2	125C; ISO;
0.35um BCD 3.3/5/65V HP35E65	200ns 2.0-5.5 3.7-5.5	+1mask 3M (806)*(1690)=1.362	2K*8 YF2K08N35B5BA	125C

Under Qualification

Process	Read Access Time(max.) Read(V) Write(/EE)(V)	Mask layers Metal/Metal thickness (X um)*(Y um)=(mm2)	Density MTP(+EE) Product name	Special Feature	Schedule
0.18um BCD 6/30V HP18EC30	820ns	+1 mask 3M 8.7KÅ (310.6)*(1198)=0.372	256*8 YEN25608N18B6AA2	ECC	1st Qual lot 10/B Qual finish 2nd ,3rd Qual lot 2019 Q1 finish
	1.8-6.6				
	4.5-6.6				

Under Qualification

Process	Read Access Time(max.) Read(V) Write(V)	Mask layers Metal/Metal thickness (X)*(Y)(um)=(mm2)	Density MTP(+EE) Product name	Other feature	Schedule
0.16um Logic 3.3V HL16GF	220ns 2.5-3.6 3.0-3.6	+1 mask (463.1)*(956)=0.443	256*8 YEN25608N16L3AA2	125C; ECC; Diff	1st Qual lot 6/E finish 2nd 3rd Qual lot 2019'Jan finish
0.16um Logic 3.3V HL16GF	200ns 2.5-3.6 3.0-3.6	+1 mask 3M (463.1)*(1951.4) =0.904	1K*8 YEN1K08N16L3AA2	125C; ECC; Diff	
0.18um Logic 5V HL18GFL	125ns 2.0-5.5 2.5-5.5	+2 mask 3M, 9KA (420)*(750)=0.315	256*8 YEN25608N18L5AA2	Diff	1st Qual lot 10/B finish 2nd 3rd Qual lot 2019Q1 finish

Under Verification

Process	Read Access Time(max.) Read(V) Write(V)	Mask layers Metal/Metal thickness (X)*(Y)(um)=(mm2)	Density MTP(+EE) Product name	Other feature	Schedule
0.13um Logic 1.2/3.3V HL13G	1us 1.6-3.6 1.7-3.6	+0 mask 3M, 8KA (205)*(351)=0.072	40*8 YEN4008N13L3AB2		7/B W/O CZ before 9/E
0.13um Logic 1.2/3.3V HL13G	1us 1.6-3.6 1.7-3.6	+0 mask 3M+ dummy metal 4, 4um (205)*(420)=0.086	128*8 YEN12808N13L3AB2		
0.13um Logic 1.2/3.3V HL13G	1us 1.6-3.6 1.7-3.6	+0 mask (205)*(671)=0.137	512*8 YEN51208N13L3AB2		
0.13um BCD 1.5/5V HP13M40GEN2	40ns(/40ns) 1.35-1.65/2.5-5.5 1.35-1.65/3.0-5.5	+1 mask 4M, 8.7KA (779)*(3104)=2.41	16K32(+128*8) YEE16K32N13B5BA1	125C; ECC;	CZ before 9/E
0.18um Logic 5V HL18GFL	60ms(/250ns) 1.8-5.5 4.5-5.5	+1 mask 3M (653)*(1963)=1.282	16K16(+128*8) YEG16K16N18L5BA1		CZ before 7/E

Customized IP

Process	Read Access Time(max.) Read(V) Write(/EE)(V)	Mask layers Metal/Metal thickness (X um)*(Y um)=(mm2)	Density MTP(+EE) Product name	Special Feature
0.18um Logic 3.3V HL18GFL		(421)*(956)=0.405	256*8	
0.18um BCD 1.8/5/80V HP18E80		(375)*(992)=0.372	4K*16	

YMC IP List in tsmc

Under Verification

Process	Read Access Time(max.) Read(V) Write(V)	Mask layers Metal/Metal thickness (X)*(Y)(um)=(mm2)	Density MTP(+EE) Product name	Other feature	Schedule
0.18um MS 1.8/5V	400ns	+0 masks 3M, 8KA (255)*(442)=0.11	256*2 YEN25602T18M5AA2	125C	CZ finish Qual 2019 Q2 finish
	1.8-5				
	4.5-5.5				
0.18um MS 1.8/5V	400ns	+0 masks 3M (255)*(174)=0.044	64*2 YUN6402T18M5AA2	125C	CZ finish Qual 2019 Q2 finish
	1.8-5.5				
	4.5-5.5				

Under Verification

Process	Read Access Time(max.) Read(V) Write(V)	Mask layers Metal/Metal thickness (X)*(Y)(um)=(mm2)	Density MTP(+EE) Product name	Other Feature	Schedule
0.18um BCD GenII 1.8/5V	400ns 1.8-5.0 4.5-5.5	+0 masks 3M (255)*(208)=0.053	256*2 YUN25602T18B5AA2	125C	CZ finish Qual 2019 Q2 finish
0.18um BCD GenII 1.8/5V	400ns 1.8-5.0 4.5-5.5	+0 masks 3M, 8KA (255)*(408)=0.104	256*2 YEN25602T18B5AA2	150C	
0.18um BCD GenII 1.8/5V	60ns(/60ns) 1.62-1.98/2.5-5.5 1.62-1.98/2.5-5.5	+2 masks 4M (620)*(3627)=2.25	16K*32(+32*32) YEG16K32T18B5BA1	125C; ISO	CZ Q3 finish
0.18um BCD GenII 1.8/5V	70ns 1.62-1.98/3.0-5.5 1.62-1.98/3.0-5.5	+2 masks 4M (640)*(1881)=1.2	6K*32 YEF6K32T18B5BA1	125C; ISO	CZ finfish

Under Verification

Process	Read Access Time(max.) Read(V) Write(/EE)(V)	Mask layers Metal/Metal thickness (X um)*(Y um)=(mm2)	Density MTP(+EE) Product name	Special Feature	Schedule
0.18um BCD GenIII 1.8/5V	400ns	+0 masks 3M (255)*(174)=0.044	64*2 YUN6402T18B5AC2	150C	CZ finish
	1.8-5				
	4.5-5.5				
0.18um BCD GenIII 1.8/5V	60ns(/60ns)	+2 masks 4M (620)*(3627)=2.25	16K*32(+128*8) YEG16K32T18B5BD1	125C; ISO	2019 Q1 CZ finish
	1.62-1.98/2.5-5.5				
	1.62-1.98/2.5-5.5				

Under Development

Process	Read Access Time(max.) Read(V) Write(/EE)(V)	Mask layers Metal/Metal thickness (X um)*(Y um)=(mm2)	Density MTP(+EE) Product name	Special Feature	Schedule
0.18um BCD GenII 1.8/5V	 1.5-5.5 4.5-5.5	3M, 8KA (99)*(115)=0.0113	4*8 YEN0408T18B5NC1	125C	To be scheduled
0.18um BCD GenIII 1.8/5V	 1.5-5.5 4.5-5.5	3M, 8KA (99)*(115)=0.0113	4*8 YEN0408T18B5NC1	125C	To be scheduled
0.18um MS 1.8/5V	 1.8-5.5 1.8-5.5		8K*8	GIV tech	To be scheduled
0.18um MS 1.8/5V	 1.8-5.5 1.8-5.5		32*16	GIV tech	To be scheduled

YMC IP List in 世界先進 VIS

Available

Process	Read Access Time(max.) Read(V) Write(/EE)(V)	Mask layers Metal/Metal thickness (X um)*(Y um)=(mm2)	Density MTP(+EE) Product name	Special Feature
0.11um HV 1.2/6V	300ns 2.3-6.6 4-6.6	3M (458)*(817)=0.374	64*8 YE6408V11H6AA2	ISO
0.11um MS 1.5/3.3V	40ns 1.35-1.65/3-3.6 1.35-1.65/3-3.6	4M (914)*(1120)=1.024	16K32(+128*8) YEE16K32V11M3BA1	ECC
0.15um HV 1.8/3.3/18V	40ns 1.6-2/2.5-3.6 1.6-2/2.5-3.6	4M,8KA (1170)*(875)=1.024	8K*32 YEN8K32V15H3BP1	ECC
0.15um HV 1.8/3.3/7V	40ns 1.6-2/2.5-3.6 1.6-2/2.5-3.6	+1 masks 4M,8KA (1170)*(915)=1.071	8K*32 YEF8K32V15H3BE1	ECC
0.15um MS 1.8/3.3V	40ns 1.6-2/2.5-3.6 1.6-2/2.5-3.6	+2 masks 4M,8KA (1170)*(915)=1.071	8K*32 YEF8K32V15M3BA1	ECC; 125C

Available

Process	Read Access Time(max.) Read(V) Write(/EE)(V)	Mask layers Metal/Metal thickness (X um)*(Y um)=(mm2)	Density MTP(+EE) Product name	Special Feature
0.25um BCD N-EPI 2.5/5V	800ns 2.0-5.5 2.7-5.5	+1 mask 3M (483)*(1707)=0.824	512*8 YE51208V25B5AB2	ISO
0.25um BCD N-EPI 2.5/5V	800ns 2.3-5.5 2.7-5.5	3M (483)*(1198)=0.579	512*8 YU51208V25B5AB	ISO
0.25um BCD N-EPI 2.5/5V	800ns 2.0-5.5 2.7-5.5	+1 mask 3M,8KA (458)*(798)=0.365	64*8 YE6408V25B5AB2	ISO
0.25um BCD N-EPI 2.5/5V	800ns 2.3-5.5 2.7-5.5	+1 mask 3M (458)*(428)=0.196	64*8 YU6408V25B5AA2	ISO
0.25um BCD EPI 2.5/5V	800ns 2.3-5.5 2.7-5.5	3M, 8KA (458)*(428)=0.196	64*8 YU6408V25B5AC	ISO
0.3um BCD 5V	400ns 2.5-5.5 4.5-5.5	+1 mask 3M (357)*(345)=0.123	4*8 YU0408V30B5AA	
0.3um HV 3.3/18V	200ns 1.8-3.6 2.7-3.6	3M (752)*(310)=0.233	64*10 YE6410V30H3AB1	

Available

Process	Read Access Time(max.) Read(V) Write(/EE)(V)	Mask layers Metal/Metal thickness (X um)*(Y um)=(mm2)	Density MTP(+EE) Product name	Special Feature
0.35um MS 3.3/5V	30ns 2.7-3.6 2.7-3.6	3M (512)*(461)=0.236	128*8 YE12808V35L3AA	
0.35um HV 3.3/18V	30ns 3.0-3.6 3.0-3.6	3M (512)*(461)=0.236	128*8 YE12808V35H3AA	
0.35um BCD 3.3/24V	30ns 3-3.6 3-3.6	+0 mask 4M (512)*(461)=0.236	128*8 YE12808V35B3AA	
0.35um MS 3.3/5V	55ns 1.8-3.6 3-3.6	+0 mask 3M (693)*(794)=0.55	2K*16 YM2K16V35L3BA	
0.35um MS 3.3/5V	80ns 2.4-3.6 2.4-3.6	+0 mask 3M (693)*(582)=0.403	2K*8 YF2K08V35L3BA	
0.35um MS 3.3/5V	55ns 1.8-3.6 2.4-3.6	+0 mask 3M (693)*(1273)=0.882	8K*8 YF8K08V35L3BB	

Available

Process	Read Access Time(max.) Read(V) Write(/EE)(V)	Mask layers Metal/Metal thickness (X um)*(Y um)=(mm2)	Density MTP(+EE) Product name	Special Feature
0.35um HV 3.3/40V	55ns 3-3.6 3-3.6	+0 mask 3M (693)*(582)=0.403	2K*8 YF2K08V35H3BB	
0.35um HV 3.3/40V	55ns 3-3.6 3-3.6	+0 mask 3M (693)*(1273)=0.882	8K*8 YF8K08V35H3BB	
0.4um BCD 5/40V	55ns 4.5-5.5 4.5-5.5	+1 mask 3M (1182)*(457)=0.54	64*10 YE6410V40B5AB	
0.4um BCD 5/40V	400ns 2.5-5.5 4.5-5.5	+1 mask 3M (357)*(345)=0.123	4*8 YU0408V40B5AC	
0.15um HV 1.8/3.3/18V Non-MR	500ns 1.8-3.6 2.2-3.6	+1 mask 3M, 8KA (154)*(1365)=0.21	512*8 YEN51208V15H3AB2	ECC; 125C

Under Qualification

Process	Read Access Time(max.) Read(V) Write(V)	Mask layers Metal/Metal thickness (X)*(Y)(um)=(mm2)	Density MTP(+EE) Product name	Other feature	Schedule
0.15um BCD-Gen1 1.8/6V (non-EPI)	1us 1.6-2 1.6-2/4.5-5.5	+2 masks 3M (280)*(578)=0.162	64*8 YEN6408V15B6AC2	125C; ISO	1st Qual pass Q4 Qual finish
0.15um BCD-Gen2 1.8/6V (EPI)	90ns 1.62-1.98 /4.5-5.5 1.62-1.98 /4.5-5.5	1P3M (960)*(1324)=1.27	8K*8 YUF8K08V15B5BA2	Diff; ECC; 150C; ISO	CZ finish 2019 Q1 finish

Under Verification

Process	Read Access Time(max.) Read(V) Write(/EE)(V)	Mask layers Metal/Metal thickness (X um)*(Y um)=(mm2)	Density MTP(+EE) Product name	Special Feature	Schedule
0.11um HV 1.5/7/32V	300ns 1.35-1.65/4.5-7.7 1.35-1.65/4.5-7.7	+2 masks 2M+dummy metal 3 (525)*(405)=0.213	512*8 YUN51208V11H7AB2	125C; ECC;	11/M CZ finish
0.11um HV 1.5/3.3/12V	40ns 1.35-1.65/3.0-3.6 1.35-1.65/3.0-3.6	+2 masks 4M (914)*(1120)=1.024	16K*32 YEN16K32V11M3BA1	ECC	CZ finish
0.15um BCD-Gen2 1.8/6V (EPI)	800ns 1.8-6.6 2.8-6.6	+1 mask 3M, 8KA (244)*(161)=0.039	64*2 YUN6402V15B5AA2	125C; 5V Device	CZ finish
0.15um BCD-Gen2 1.8/6V (EPI)	300ns 2.3-5.5 4.0-5.5	+1 mask 3M (458)*(818)=0.375	64*8 YE6408V15B6AA2	150C; ISO; 5V Device	Q4 CZ finish
0.18um MS 1.8/3.3V	250ns 1.8-3.6 2.4-3.6	+1 mask 3M (1705)*(1091)=1.86	32K*8 YEN32K08V18M3BB1	ECC	Q4 CZ finish

Under Development

Process	Read Access Time(max.) Read(V) Write(V)	Mask layers Metal/Metal thickness (X)*(Y)(um)=(mm2)	Density MTP(+EE) Product name	Other feature	Schedule
0.15um BCD Gen3 1.8/6V(EPI)	40ns 1.62-1.98/2.7-5.5 1.62-1.98/2.5-5.5	+1 mask 3M,8KA	16K*32(+512*8) YEG16K32V15B5BA1	ISO; 125C	Q4 CZ finish
0.15um BCD Gen3 1.8/6V(EPI)	50ns 2.5-6.6 4.5-6.6	+1 mask 3M, 30KA (706)*(2216)=1.56	8K*32 YEF8K32V15B5BA1	ISO; 125C	Q4 CZ finish
0.15um BCD Gen3 1.8/6V(Non-EPI)	40ns 1.62-1.98/2.7-5.5 1.62-1.98/2.5-5.5	+1 mask 3M,8KA	16K*32(+512*8) YEG16K32V15B5BA1	ISO; 125C	2019 Q1 CZ finish
0.15umBCD Gen3 1.8/6V(Non-EPI)	50ns 2.5-6.6 4.5-6.6	+1 mask 3M,8KA (706)*(2797)=1.98	8K*32 YEF8K32V15B6BA1	ISO; 125C	2019 Q1 CZ finish

Under Development

Process	Read Access Time(max.) Read(V) Write(V)	Mask layers Metal/Metal thickness (X)*(Y)(um)=(mm2)	Density MTP(+EE) Product name	Other feature	Schedule
0.15um BCD Gen3 1.8/6V	TBD	(75)*(52)=0.0039	4*8 YUN0408V15B6AA1	125C	To be scheduled
	5				
	5-6				
0.15um BCD Gen3 1.8/6V	TBD	(90)*(75)=0.00675	4*8 YEN0408V15B6AA1	125C	To be scheduled
	5				
	5-6				
0.15um HV 1.8/3.3/18V MR	500ns	3M, 8KA (154)*(1365)=0.21	512*8 YEN51208V15H3AA2	ECC; 125C	To be scheduled
	1.8-3.6				
	2.2-3.6				
0.15um BCD-Gen2 1.8/6V (EPI)	50ns	+1 mask 3M (706)*(2216)=1.56	8K32 YEF8K32V15B5BA1	125C; ISO	To be scheduled
	2.5-5.5				
	4.5-5.5				
0.11um MS 1.5/3.3V	2us	(405)*(209)=0.085	256*8 YEN25608V11M3AA2		To be scheduled
	1.6-3.6				
	3.0-3.6				

YMC IP List in Powerchip

Available

Process	Read Access Time(max.) Read(V) Write(/EE)(V)	Mask layers Metal/Metal thickness (X um)*(Y um)=(mm2)	Density MTP(+EE) Product name	Special Feature
90nm 1.2/6/32V	300ns 1.25-1.35/2.3-4.8 1.25-1.35/2.3-4.8	+2 masks 3M, 6KA (250)*(628)=0.157	512*8 YU51208P90H6AA	ISO
90nm 1.2/6/32V	300ns 1.2-1.45/2.3-6.6 1.2-1.45/2.3-6.6	+2 masks 3M, 6KA (177)*(982)=0.174	512*8 YUN51208E90H6AB2	ISO
110nm-N 1.5/6/32V	300ns 1.35-1.65/2.3-4.8 1.5/2.8	(200)*(1178)=0.236	512*8 YM51208P11H6AA	

Under Qualification

Process	Read Access Time(max.) Read(V) Write(V)	Mask layers Metal/Metal thickness (X)*(Y)(um)=(mm2)	Density MTP(+EE) Product name	Other feature	Schedule
90nm 1.2/6/32V	40ns 2.3-6.6 2.3-6.6	+1 mask	1K*8 YUN1K08E90H6BA2	125C	2019 Q1 Qual finish

YMC IP List in Maxchip

Available

Process	Read Access Time(max.) Read(V) Write(/EE)(V)	Mask layers Metal/Metal thickness (X um)*(Y um)=(mm2)	Density MTP(+EE) Product name	Special Feature
0.18um HV 6V/12V	500ns	(598)*(858) 0.418 *L-shape	256*8 YE25608P18H6AB2	125C
	1.8-6.5			
	3.5-6.5			

Under Qualification

Process	Read Access Time(max.) Read(V) Write(V)	Mask layers Metal/Metal thickness (X)*(Y)(um)=(mm2)	Density MTP(+EE) Product name	Other feature	Schedule
0.15um HV 1.8/3.3/18V	200ns 2.7-3.6 2.7-3.6	+2 masks 2M, 9KA (150)*(2700)=0.405	512*8 YEN51208P15L3AB2	150C; ECC	1st Qual finish 2/3 lot Q4 finish

YMC IP List in Nexchip

Under Verification

Process	Read Access Time(max.) Read(V) Write(V)	Mask layers Metal/Metal thickness (X)*(Y)(um)=(mm2)	Density MTP(+EE) Product name	Other feature	Schedule
110nm-N 1.5/6/32V	300ns 1.35-1.65/2.3-6.6 1.35-1.65/3.0-6.6	+2 masks 3M (209)* (1227)=0.281	512*8 YUN51208L11H6AA2		2019 Q1 Qual finish

Under Development

Process	Read Access Time(max.) Read(V) Write(V)	Mask layers Metal/Metal thickness (X)*(Y)(um)=(mm2)	Density MTP(+EE) Product name	Other feature	Schedule
90nm HV 1.2/6/32V	300ns 1.2-1.45/2.3-6.6 1.2-1.45/2.3-6.6	+2 masks 3M (177)*(982)=0.173	512*8 YUN51208L90H6AA2		Q3 CZ finish
90nm HV 1.2/6/32V	40ns 2.3-6.6 2.3-6.6	+2 masks 3M, 10KA 0.349 *L shape	1K*8 YUN1K08L90H6BA2	125C; ECC	Q3 CZ finish
110nm	40ns 2.3-6.6 2.3-6.6	+2 masks 3M 0.33 *L shape	1K8 YUN1K08L11H6BA2	125C; ECC	Q4 CZ finish
110nm	40ns 1.8-5.5 4.5-5.5	+1 mask 3M	16K32 YEE16K32L11L5BA1		Q4 CZ finish

YMC IP List in HHGrace

Available

Process	Read Access Time(max.) Read(V) Write(/EE)(V)	Mask layers Metal/Metal thickness (X um)*(Y um)=(mm2)	Density MTP(+EE) Product name	Special Feature
0.35um Logic 5V	125ns 1.8-5.5 4.5-5.5	3M (849)*(1810)=1.537	8K*8/4K*16 YM8K08C35L5BA	
0.18um Logic 5V	25ns 1.8-5.5 4.5-5.5	3M, 8KA (322)*(895)=0.288	4K*16 YU4K16C18L5AC1	
0.18um Logic 5V	250ns 1.8-5.5 4.5-5.5	(193)*(656)=0.127	1*14 YU1K14C18L5AC1	

Under Verification

Process	Read Access Time(max.) Read(V) Write(V)	Mask layers Metal/Metal thickness (X)*(Y)(um)=(mm2)	Density MTP(+EE) Product name	Other feature	Schedule
0.18um Logic 5V	62.5ns(/62.5ns) 1.8-5.5(/1.8-5.5) 4.5-5.5(/2.5-5.5)	+1 mask 3M, 8.5KA (617)*(845)=0.521	8K*8(+64*8) YEE8K08C18L5BB1		Q3 finish
0.18um Logic 5V	62.5ns(/62.5ns) 1.8-5.5(/1.8-5.5) 4.5-5.5(/2.5-5.5)	+1 mask 3M, 8.5KA	8K*16(+128*8) YEE8K16C18L5BA1		
95nm Logic 5V	60ns(/300ns) 1.8-5.5(/1.8-5.5) 4.5-5.5(/2.6-5.5)	(600)*(1000)=0.6	8K*16(+128*8) TBD		Q3 finish

Under Development

Process	Read Access Time(max.) Read(V) Write(V)	Mask layers Metal/Metal thickness (X)*(Y)(um)=(mm2)	Density MTP(+EE) Product name	Other feature	Schedule
95nm Logic 5V			4K*16		

YMC IP List in MXIC

Available

Process	Read Access Time(max.) Read(V) Write(/EE)(V)	Mask layers Metal/Metal thickness (X um)*(Y um)=(mm2)	Density MTP(+EE) Product name	Special Feature
0.5um Logic 5V	2us 2.0-5.5 2.8-3.0	(521)*(170)=0.088	1*32 YU0132M55A	
0.5um MS 5/18V	70ns 4.5-5.5 4.5-5.5	+1 mask 3M, 7KA (657)*(334)=0.219	64*8 YEF6408M55L5AA1	L50G
0.5um MS 5/18V	70ns 4.5-5.5 4.5-5.5	+1 mask 3M, 7KA (657)*(334)=0.219	64*8 YEF6408M55L5AB1	L50W
0.5um MS 5/18V	70ns 4.5-5.5 4.5-5.5	+1 mask 3M, 7KA (657)*(334)=0.219	64*8 YEF6408M55L5AC1	L50E
0.35um Logic 3.3/5V	55ns 2.2-3.6 2.7-3.6	(604)*(254)=0.153	256*1 YE25601M35L3AA	

Under Verification

Process	Read Access Time(max.) Read(V) Write(V)	Mask layers Metal/Metal thickness (X)*(Y)(um)=(mm2)	Density MTP(+EE) Product name	Other feature	Schedule
0.18um Logic 5V	60ns	+1 mask 3M, 8KA (396)*(1413)=0.56	4K16 YEF4K16M18L5BA1	L18A	7/E CZ finish Q4 Qual finish
	1.8-5.5				
	3.3-5.5				

Customized IP

Process	Read Access Time(max.) Read(V) Write(/EE)(V)	Mask layers Metal/Metal thickness (X um)*(Y um)=(mm2)	Density MTP(+EE) Product name	Special Feature
0.35um Logic 3.3/5V	2us 1.5-3.0 2.2-3.0	(527)*(326)=0.172	64*1 YE6401M35L3AA	

YMC IP List in nuvoTon

Available

Process	Read Access Time(max.) Read(V) Write(/EE)(V)	Mask layers Metal/Metal thickness (X um)*(Y um)=(mm2)	Density MTP(+EE) Product name	Special Feature
0.35um Logic 3.3V/5V process	250ns 1.2-1.8/2.4-3.6 2.1-2.3	+0 mask 3M, 8KA (683)*(1080)=0.74	4K*16 YM4K16W35L3AC1	
0.35um Logic 3.3V/5V process	150ns 1.8-3.6 3.0	(614)*(1080)=0.663	4K*14 YM4K14W35L3AB	
0.35um Logic 3.3V/5V process	150ns 1.8-3.6 3.0	(683)*(715)=0.488	4K*8 YM4K08W35L3AB	
0.35um Logic 3.3V/5V process	250ns 1.5-3.6 2.7-3.6	3M, 8KA (360)*(613)=0.22	1K*14 YU1K14W35L3AB	
0.35um Logic 3.3V/5V process	200ns 1.8-3.6 2.4-3.6	(354)*(267)=0.108	32*1 YU3201W35L3AA	

Available

Process	Read Access Time(max.) Read(V) Write(/EE)(V)	Mask layers Metal/Metal thickness (X um)*(Y um)=(mm2)	Density MTP(+EE) Product name	Special Feature
0.35um Logic 3.3V/5V process	100ns 2.0-3.6 2.7-3.6	(740)*(2039)=1.509	16K*8 YEF16K08W35L3BA1	
0.35um Logic 3.3V/5V process	200ns 1.8-3.6 2.7-3.6	(1229)*(1287)=1.58	16K*8 YF16K8W35L3AB	
0.35um Logic 3.3V/5V process	300ns 1.8-3.6 2.7-3.6	(1228)*(2091)=2.57	16K*16 YF16K16W35L3AB	
0.35um Logic 3.3V/5V process	200ns 1.8-3.6 2.7-3.6	3M, 8KA (1228.2)*(1288)=1.582	8K*16 YE8K16W35L3AB1	
0.35um Logic 3.3V/5V process	100ns 2.0-3.6 2.7-3.6	(740)*(1175)=0.87	8K*8 YF8K08W35L3BA	
0.35um Logic 3.3V/5V process	200ns 1.8-3.6 2.7-3.6	(1228.2)*(885)=1.087	8K*8 YF8K08W35L3AB	
0.35um Logic 3.3V/5V process	250ns 2.0-3.6 2.2-3.6	(1471)*(282)=0.415	256*8 YE25608W35L3AB	

Under Development

Process	Read Access Time(max.) Read(V) Write(V)	Mask layers Metal/Metal thickness (X)*(Y)(um)=(mm2)	Density MTP(+EE) Product name	Other feature	Schedule
0.35um BCD 5/25/40V	TBD	+0 mask 2M, 30KA 0.04	4*8 YUN0408W35B5NA1	125C; ISO	8/M CZ finish
	2.5-5.5				
	4.5-5.5				

YMC IP List in UMC

Available

Process	Read Access Time(max.) Read(V) Write(/EE)(V)	Mask layers Metal/Metal thickness (X um)*(Y um)=(mm2)	Density MTP(+EE) Product name	Special Feature
0.18um BCD 1.8/5V	200ns 4.5-5.5 4.5-5.5	4M (947)*(1664)=1.576	2K*8 YF2K08U18B5BA	125C; Fab 8C
0.25um BCD 5/18V EPI	200ns 4.5-5.5 4.5-5.5	(950)*(1022)=0.971	1K*8 YE1K08U25B5AB	125C; Fab 8AB
0.25um BCD 5V Non-EPI	200ns 4.5-5.5 4.5-5.5	(950)*(1022)=0.971	1K*8 YE1K08U25B5AA	125C; Fab 8AB
0.3umb BCD 5V	200ns 4.5-5.5 4.5-5.5	(950)*(1022)=0.971	1K*8 YF1K08U30B5AA	125C; Fab 8AB

Available

Process	Read Access Time(max.) Read(V) Write(/EE)(V)	Mask layers Metal/Metal thickness (X um)*(Y um)=(mm2)	Density MTP(+EE) Product name	Special Feature
0.13um HV 1.5/5.5/16V	100ns 1.35-1.65/4.5-5.5 1.35-1.65/4.5-5.5	(463)*(6349)=2.94	32K*16 YF32K16U13H6BA	Fab 8F
0.28um HV 3.3/9/18V	200ns 2.4-3.6 2.7-3.6	3M (914)*(310)=0.28	128*8 YE12808U28H3AA1	125C; Fab 8AB
0.28um HV 3.3/9/18V	200ns 2.4-3.6 2.7-3.6	3M (914)*(310)=0.28	128*8 YE12808U28H3AB1	Fab 8AB
0.35um EHV 3.3/18V	200ns 1.8-3.6 2.7-3.6	(421)*(630)=0.265	128*8 YE12808U35A	Fab 8AB
0.35um HV 3.3V	100ns 2.7-3.6 2.7-3.6	(804)*(644)=0.518	2K*8 YF2K08U35H3BA	Fab 8AB

Available

Process	Read Access Time(max.) Read(V) Write(/EE)(V)	Mask layers Metal/Metal thickness (X um)*(Y um)=(mm2)	Density MTP(+EE) Product name	Special Feature
0.153um MS 1.8/3.3V	70ns 1.62-1.98/ 3.0-3.6 1.62-1.98/ 3.0-3.6	(980)*(2135)=2.09	16K*16 YF16K16U15L3BA	Fab 8E
0.16um Logic 1.8V/3.3V	120ns 1.62-1.98/ 3.0-3.6 1.62-1.98/ 3.0-3.6	(825)*(1797)=1.48	16K*16 YF16K16U16L3BA	Fab 8E
0.18um Logic 1.8/3.3V	120ns 1.62-1.98/ 3.0-3.6 1.62-1.98/ 3.0-3.6	(831)*(1818)=1.51	16K*16 YF16K16U18L3BA	Fab 8E
0.35um CD/FD MOS 5.5V	500ns 1.8-6.0 4.5-6.0	(914)*(428)=0.391	32*8 YF3208U35F5AB	Fab 8AB; 125C

YMC IP List in SMIC

Available

Process	Read Access Time(max.) Read(V) Write(/EE)(V)	Mask layers Metal/Metal thickness (X um)*(Y um)=(mm2)	Density MTP(+EE) Product name	Special Feature
0.18um MS 1.8/5V	250ns 3.0-5.5 4.0-5.5	0.52	512*8 YE51208S18M5AA	125C

Customized IP

Process	Read Access Time(max.) Read(V) Write(/EE)(V)	Mask layers Metal/Metal thickness (X um)*(Y um)=(mm2)	Density MTP(+EE) Product name	Special Feature
0.153um MS 1.8/3.3V		(1170)*(1871)=2.19	16K*32 YE16K32S15M3BA1	

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