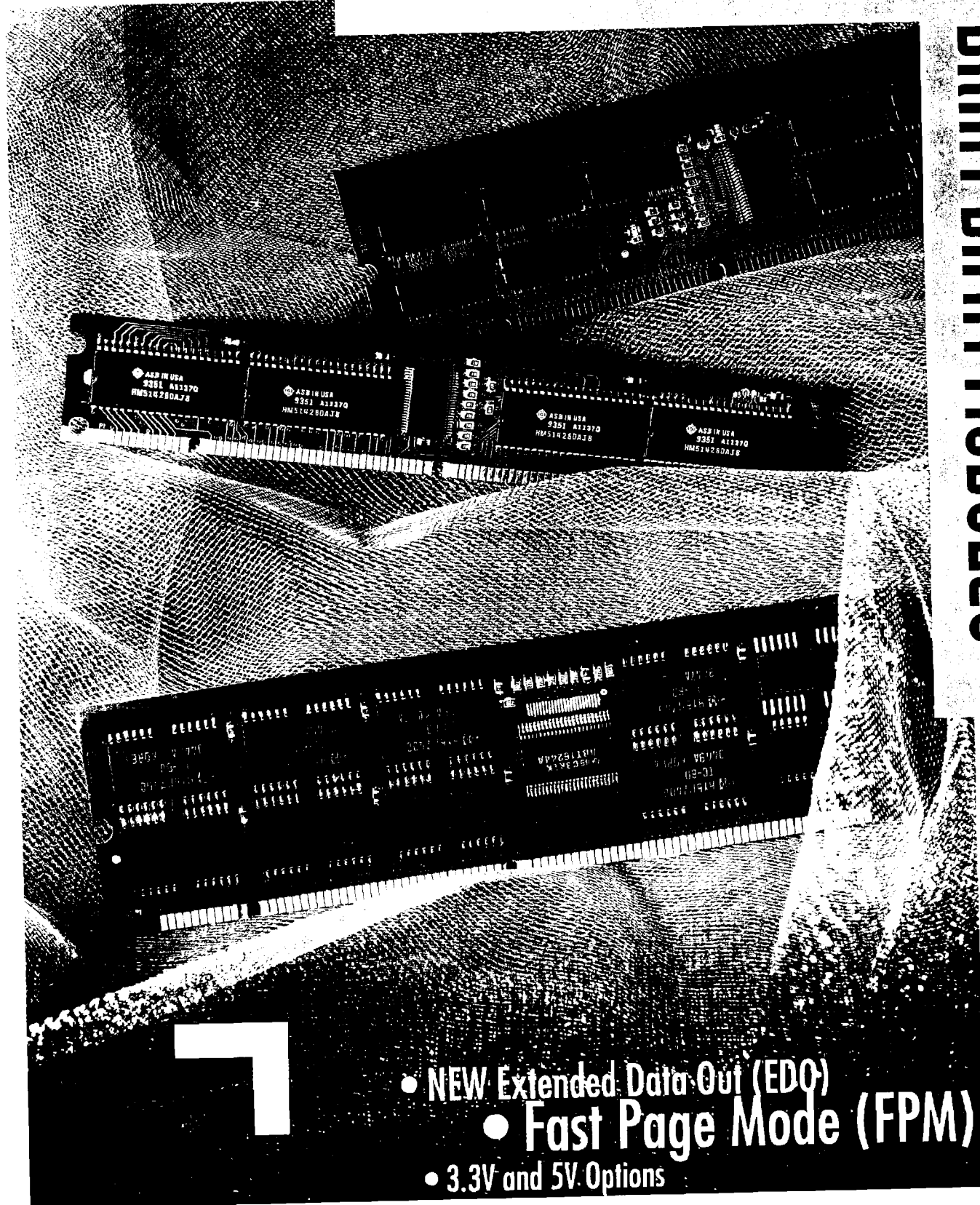


# 168 PIN 8 BYTE WIDE

# DRAM DIMM MODULES



- NEW Extended Data Out (EDO)
- Fast Page Mode (FPM)
- 3.3V and 5V Options
- ECC or Parity Pinouts
- Custom designs available

\*SMR TSO15\*

# QUICK REFERENCE GUIDE: 168 PIN DRAM DIMM MODULES

DENSITY	ORG.	REFSH.	EDAC*	DRAMS			DIMEN. LxHxT**(in.)	SMART PART NO.***	COMMENTS
				1M	4M	16M			

## 5V FAST PAGE MODE (FPM) 64 BIT I/O DIMMS

32M3	4M x 64	2K	N	-	-	16	5.25 x 1.0 x T <sub>2</sub>	SM564044002XXYZ	Byte Control
32M3	4M x 64	4K	N	-	-	16	5.25 x 1.0 x T <sub>2</sub>	SM564044004XXYZ	Byte Control
32M3	4M x 64	2K	N	-	-	16	5.25 x 1.0 x T <sub>2</sub>	SM564048002XXYZ	Byte Control
16M3	2M x 64	2K	N	-	-	8	5.25 x 1.0 x T <sub>2</sub>	SM564028002XXYZ	Byte Control
16M3	2M x 64	1K	N	-	-	8	5.25 x 1.0 x T <sub>2</sub>	SM564023101XXYZ	Byte Control
16M3	2M x 64	4K	N	-	-	8	5.25 x 1.0 x T <sub>2</sub>	SM564023104XXYZ	Byte Control
8MB	1M x 64	1K	N	-	16	-	5.25 x 1.0 x T <sub>2</sub>	SM5640100BYZ	Byte Control
8MB	1M x 64	1K	N	-	-	4	5.25 x 1.0 x T <sub>1</sub>	SM564013101XXYZ	Byte Control
8MB	1M x 64	4K	N	-	-	4	5.25 x 1.0 x T <sub>1</sub>	SM564013104XXYZ	Byte Control

## 3.3V FAST PAGE MODE (FPM) 64 BIT I/O DIMMS

32M3	4M x 64	2K	N	-	-	16	5.25 x 1.0 x T <sub>2</sub>	SM564044012XXYZ	Byte control
32M3	4M x 64	4K	N	-	-	16	5.25 x 1.0 x T <sub>2</sub>	SM564044014XXYZ	Byte control
16M3	2M x 64	2K	N	-	8	-	5.25 x 1.0 x T <sub>1</sub>	SM564028012XXYZ	Byte control
8MB	1M x 64	1K	N	-	16	-	5.25 x 1.0 x T <sub>2</sub>	SM564014011XXYZ	Byte control

## 5V FAST PAGE MODE (FPM) 72 BIT I/O DIMMS

64M3	8M x 72	2K	P	-	16	32	5.25 x 1.6 x T <sub>2</sub>	SM572084002PXYZ	Byte + Parity bit control
64M3	8M x 72	4K	P	-	16	32	5.25 x 1.6 x T <sub>2</sub>	SM572084004PXYZ	Byte + Parity bit control
64M3	8M x 72	2K	E	-	-	36	5.25 x 1.5 x T <sub>2</sub>	SM572084002EXYZ	36 bit word control
64M3	8M x 72	4K	E	-	-	36	5.25 x 1.5 x T <sub>2</sub>	SM572084004EXYZ	36 bit word control
32M3	4M x 72	2K	P	-	8	16	5.25 x 1.0 x T <sub>2</sub>	SM572044002PXYZ	Byte + Parity bit control
32M3	4M x 72	4K	P	-	8	16	5.25 x 1.0 x T <sub>2</sub>	SM572044004PXYZ	Byte + Parity bit control
16M3	2M x 72	2K	E	-	-	9	5.25 x 1.0 x T <sub>2</sub>	SM572028002EXYZ	40/32 bit word control
16M3	2M x 72	1K	E	-	-	8	5.25 x 1.0 x T <sub>2</sub>	SM572025101EXYZ	36 bit word control
8MB	1M x 72	1K	P	8	16	-	5.25 x 1.0 x T <sub>2</sub>	SM57201000BYZ	Byte + Parity bit control
8MB	1M x 72	1K	P	-	-	4	5.25 x 1.0 x T <sub>1</sub>	SM572015101XXYZ	Byte + Parity bit control
8MB	1M x 72	1K	E	-	18	-	5.25 x 1.0 x T <sub>2</sub>	SM572014001ELYZ	36 bit word control
2MB	256K x 72	512	P	-	4	-	5.25 x 1.0 x T <sub>1</sub>	SM572256YZ	Byte + Parity bit control
2MB	256K x 72	512	P	-	5	-	5.25 x 1.0 x T <sub>1</sub>	SM572256AYZ	Byte + Parity bit control

\*P = Parity, E = ECC, N = None, \*\*T<sub>1</sub> = 0.200" for SOJ & 0.120" for TSOP, T<sub>2</sub> = 0.350" for SOJ & 0.170" for TSOP

\*\*\* Refer to the ordering instructions below the part numbering guide to indicate DRAM package type, lead finish and access time

## QUICK REFERENCE GUIDE: 168 PIN DRAM DIMM MODULES contd.

DENSITY	ORG.	REFSH.	EDAC*	DRAMS			DIMEN. LxHxT**(in.)	SMART PART NO.***	COMMENTS
				1M	4M	16M			
<b>3.3V FAST PAGE MODE (FPM) 72 BIT I/O DIMMS</b>									
64M}	8M x 72	2K	E	-	-	36	5.25 x 1.5 x T <sub>2</sub>	SM572084012EXYZ	36 bit word control
64M}	8M x 72	4K	E	-	-	36	5.25 x 1.5 x T <sub>2</sub>	SM572084014EXYZ	36 bit word control
32M}	4M x 72	2K	E	-	-	18	5.25 x 1.0 x T <sub>2</sub>	SM572044012EXYZ	36 bit word control
32M}	4M x 72	4K	E	-	-	18	5.25 x 1.0 x T <sub>2</sub>	SM572044014EXYZ	36 bit word control
16M}	2M x 72	2K	E	-	-	9	5.25 x 1.0 x T <sub>2</sub>	SM572028012EXYZ	40/32 bit word control
8MB	1M x 72	1K	P	8	16	-	5.25 x 1.0 x T <sub>2</sub>	SM572014011PXYZ	Byte + Parity bit control
8MB	1M x 72	1K	E	-	18	-	5.25 x 1.0 x T <sub>2</sub>	SM572014011EXYZ	36 bit word control

### 5V EXTENDED DATA OUT (EDO) 72 BIT I/O DIMMS

64M}	8M x 72	2K	E	-	-	36	5.25 x 1.5 x T <sub>2</sub>	SM572084082EXYZ	36 bit word control
64M}	8M x 72	4K	E	-	-	36	5.25 x 1.5 x T <sub>2</sub>	SM572084084EXYZ	36 bit word control
32M}	4M x 72	2K	E	-	-	18	5.25 x 1.0 x T <sub>2</sub>	SM572044082EXYZ	36 bit word control
32M}	4M x 72	2K	E	-	-	18	5.25 x 1.0 x T <sub>2</sub>	SM572044082EXYZ	36 bit word control
16M}	2M x 72	2K	E	-	-	9	5.25 x 1.0 x T <sub>2</sub>	SM572028012EXYZ	40/32 bit word control
8MB	1M x 72	1K	E	-	18	-	5.25 x 1.0 x T <sub>2</sub>	SM572014081EXYZ	36 bit word control

### 3.3V EXTENDED DATA OUT (EDO) 72 BIT I/O DIMMS

64M}	8M x 72	2K	E	-	-	36	5.25 x 1.5 x T <sub>2</sub>	SM572084092EXYZ	36 bit word control
64M}	8M x 72	4K	E	-	-	36	5.25 x 1.5 x T <sub>2</sub>	SM572084094EXYZ	36 bit word control
32M}	4M x 72	2K	E	-	-	18	5.25 x 1.0 x T <sub>2</sub>	SM572044092EXYZ	36 bit word control
32M}	4M x 72	2K	E	-	-	18	5.25 x 1.0 x T <sub>2</sub>	SM572044092EXYZ	36 bit word control
16M}	2M x 72	2K	E	-	-	9	5.25 x 1.0 x T <sub>2</sub>	SM572028092EXYZ	40/32 bit word control
8MB	1M x 72	1K	E	-	18	-	5.25 x 1.0 x T <sub>2</sub>	SM572014091EXYZ	36 bit word control

\*P = Parity, E = ECC, N = None, \*\*T<sub>1</sub> = 0.200" for SOJ & 0.120" for TSOP, T<sub>2</sub> = 0.350" for SOJ & 0.170" for TSOP

\*\*\*Refer to the ordering instructions below the part numbering guide to indicate DRAM package type, lead finish and access time

# QUICK REFERENCE GUIDE: 168 PIN DRAM DIMM MODULES contd.

DENSITY	ORG.	REFSH.	EDAC*	DRAMS			DIMEN. LxHxT**(in.)	SMART PART NO.***	COMMENTS
				1M	4M	16M			

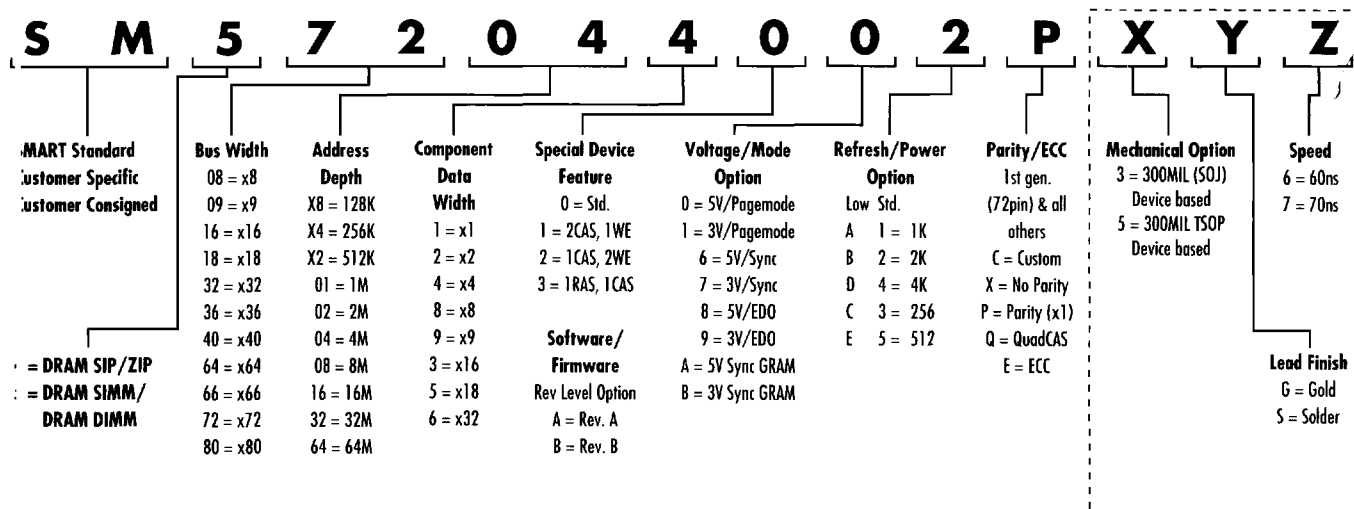
## 5V FAST PAGE MODE (FPM) 80 BIT I/O DIMMS (IN DEVELOPMENT)

64MB	8M x 80	4K	E	-	-	40	5.25 x 1.5 x T <sub>2</sub>	SM580084004EXYZ	40 bit word control
64MB	8M x 80	2K	E	-	-	40	5.25 x 1.5 x T <sub>2</sub>	SM580088002EXYZ	40 bit word control
64MB	8M x 80	1K	E	-	-	40	5.25 x 1.5 x T <sub>2</sub>	SM580083001EXYZ	40 bit word control
32MB	4M x 80	4K	E	-	-	20	5.25 x 1.0 x T <sub>2</sub>	SM580044004EXYZ	40 bit word control
32MB	4M x 80	2K	E	-	-	20	5.25 x 1.0 x T <sub>2</sub>	SM580048002EXYZ	40 bit word control
32MB	4M x 80	1K	E	-	-	20	5.25 x 1.0 x T <sub>2</sub>	SM580043001EXYZ	40 bit word control
16MB	2M x 80	2K	E	-	-	10	5.25 x 1.0 x T <sub>2</sub>	SM580028002EXYZ	40 bit word control
16MB	2M x 80	1K	E	-	-	10	5.25 x 1.0 x T <sub>2</sub>	SM580023001EXYZ	40 bit word control
8MB	1M x 80	1K	E	-	-	5	5.25 x 1.0 x T <sub>1</sub>	SM580013001EXYZ	40 bit word control
8MB	1M x 80	2K	E	-	-	5	5.25 x 1.0 x T <sub>1</sub>	SM580013002EXYZ	40 bit word control
8MB	1M x 80	1K	E	-	20	-	5.25 x 1.0 x T <sub>2</sub>	SM580014001EXYZ	40 bit word control

\*P = Parity, E = ECC, N = None, \*\*T<sub>1</sub> = 0.200" for SOJ & 0.120" for TSOP, T<sub>2</sub> = 0.350" for SOJ & 0.170" for TSOP

\*\*\*Refer to the ordering instructions below the part numbering guide to indicate DRAM package type, lead finish and access time

## DRAM MODULE PART NUMBERING GUIDE



Shown above is our new part numbering guide which applies only to new products. Part numbers of existing products do not follow this scheme. To order, complete the part numbers in the quick reference guide by selecting the desired X, Y, and Z codes from the above guide.

**EXAMPLE: SM572044002P 3 S Z 4M x 72, 5V, FPM, DRAM in SOJ package, solder lead finish, 70 ns access time**

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