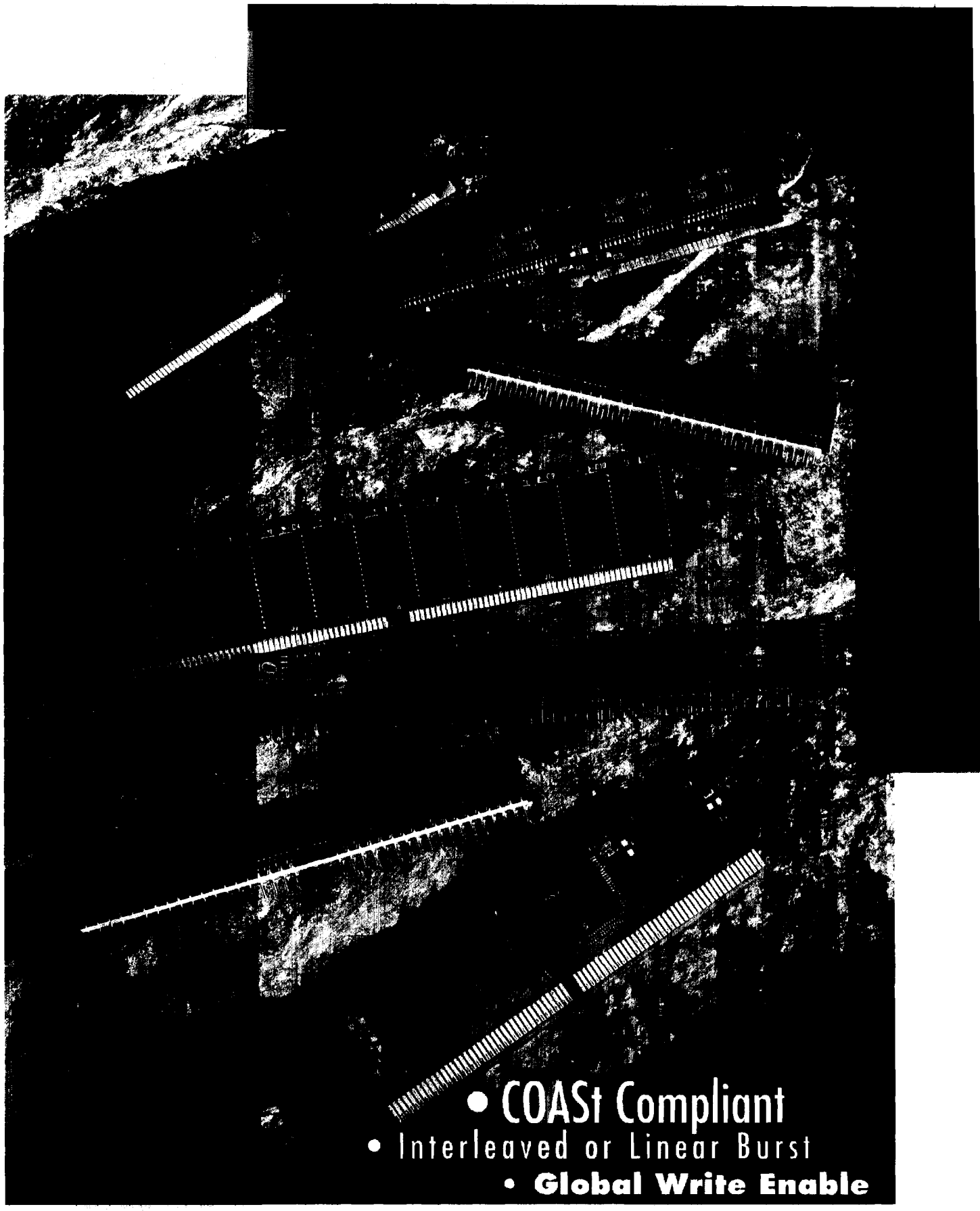


SMRTB008

- COASt Compliant
- Interleaved or Linear Burst
- **Global Write Enable**
- Telecom & Industrial SRAM Modules
- Custom designs available

SMART®
Modular Technologies

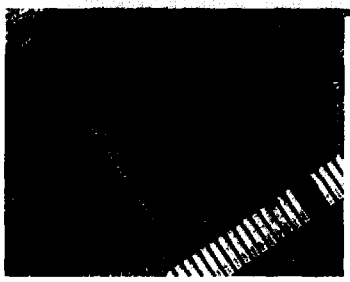
QUICK REFERENCE GUIDE: L2 CACHE SRAM MODULES

CACHE SIZE	CACHE TYPE	SPEED	PART NUMBER	DIMENSIONS L x H x T (in.)	AVAILABILITY
INTEL COAST COMPLIANT, L2 CACHE MODULES, 160 PIN, 64 BIT DATA BUS (INTERLEAVED BURST)					
512KB	Pipelined Burst	66 MHz	SM364SCSP83XI15	4.34 x 1.13 x 0.36	In Production
512KB	Pipelined Burst	66 MHz	SM364SCSPB3XI15	4.34 x 1.13 x 0.36	In Production
256KB	Pipelined Burst	66 MHz	SM364TCSP83XI15	4.34 x 1.13 x 0.21	In Production
256KB	Asynchronous	66 MHz	SM364T8A083XI15	4.34 x 1.13 x 0.36	In Production

I/O BITS	PART NO.	CONFIG.	NO. PINS	TYPE OF PINS	DENSITY	SPEED (ns)
TELECOMMUNICATION & INDUSTRIAL SRAM MODULES						
16 bit I/O products	SM21664	64K x 16	40	SIP	128KB	35-55
24 bit I/O	SM224256Z	256K x 24	56	ZIP	768KB	20-35
32 bit I/O	SM23264Z	64K x 32	64	ZIP	256KB	15-25
	SM232128Z	128K x 32	64	ZIP	512KB	20-35
	SM332E8AON5XUUU	128K x 32	64	SIMM	512KB	15-25
	SM232256Z	256K x 32	64	ZIP	1MB	15-25
	SM332256TP	256K x 32	64	SIMM	1MB	70-100
	SM332Q4AON5LUUU	256K x 32	64	SIMM	1MB	15-25
	SM332T8AON5XUUU	32K x 32	72	SIMM, ZIP	128KB	15-80
	SM332S4AON5XUUU	64K x 32	72	SIMM, ZIP	256KB	15-80
	SM332E8AON5XUUU	128K x 32	72	SIMM, ZIP	512KB	15-80
	SM332Q4AON5XUUU	256K x 32	72	SIMM, ZIP	1MB	15-80
	SM332H8AON5XUUU	512K x 32	72	SIMM, ZIP	2MB	15-80

COMPARING L2 CACHE QUALITY

PRINTED CIRCUIT BOARD

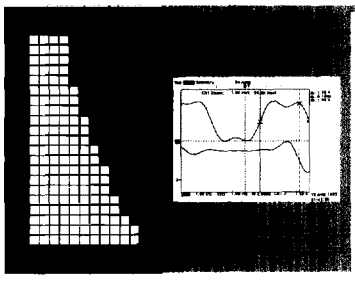


SMART Quality	Questionable Quality
- Separate power & ground planes	- Power and ground routed
- Thickness spec tolerance tightened	- Standard thickness spec, allows loose contact
- 30 Microinches gold over 75 microinches of nickel (minimums)	- Flash gold, no nickel barrier
- Signals routed for performance	- Signals routed for connectability
- Meet temp cycle and 85/85 standards	- Temp cycle and 85/85 never tested
- UL 94v-0 flammability rating	- No flammability rating

MODULE TESTING

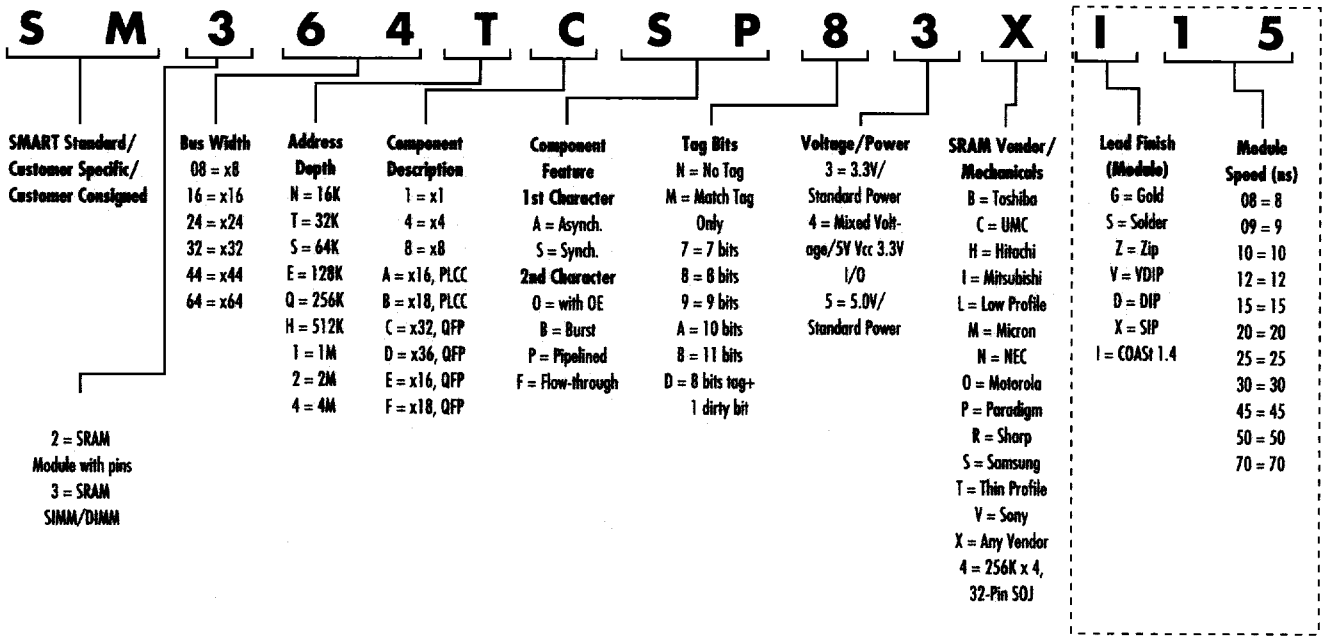
SMART Quality	Questionable Quality
- I/O leakage (nanoamps) tested	- Not tested
- I/O levels tested	- Not tested
- Power, current limits tested	- Not tested
- Opens & shorts tested	- Opens & shorts tested
- Clock access time tested at frequency	- Functional test
- Cycle time tested to spec	- Functional test
- Both tag and data patterns tested at frequency	- Functional test
- Output loaded to spec during test	- No load used
- Worst case voltage conditions used	- Nominal voltage only

QUALIFICATION



SMART Quality	Questionable Quality
- Characterization	- None
- Shmoo plots hot, cold, and room	- None
- Temp testing on motherboards	- Simple motherboard test at room temp
- Noise margin analysis	- None
- Failure mode analysis if marginal	- None

SRAM MODULE PART NUMBERING GUIDE



Shown above is our new part numbering guide which applies to newer products. Part numbers of earlier designs do not follow this scheme. To order a specific line item, use the part number shown in the product list and fill in the necessary characters according to the guide above.

EXAMPLE: SM364TCSP83X I 1 5 **32K x 64, Pipelined Burst, 3.3V, COASt 1.4, 15 ns cycle time (66 MHz)**

L2 CACHE MODULES FOR HIGH PERFORMANCE COMPUTERS

SMART Modular Technologies offers a growing line of L2 (Secondary) Cache modules. These modules enable a 25 to 35 percent system performance improvement.

Multitasking operating systems, such as Window 95 coupled with 100 MHz (and higher) microprocessor operation, make L2 Cache memory an essential system component.

Benefits of L2 Cache modules from SMART Modular Technologies

- Optional granularity, 256 Kbytes, 512 Kbytes and 1 Mbytes
- Optional operating modes, Asynchronous, Synchronous, Flow-through, Pipelined Burst, Interleaved, Linear, etc.
- Optional operating frequency 66 MHz to 100 MHz
- Dock to stock (or dock to line) quality and reliability
- Fully tested, parametric, and functional at full operating frequency, to the datasheet specifications

Other products manufactured by SMART Modular Technologies:

- Full line of 72 pin JEDEC standard DRAM SIMM modules to 64MB with 3.3V and 5V, FPM and EDO options
- Full line of 168 pin, 8 byte wide DRAM DIMM modules to 64MB with 3.3V and 5V, FPM, EDO and SDRAM options
- Full line of 72 pin SO DIMM DRAM modules to 16MB with 3.3V and 5V, FPM and EDO options
- 144 pin SO DIMM with FPM, EDO and SDRAM options in development
- Sun SPARCstation 10/20 memory modules
- Full line of Flash SIMM modules up to 32MB
- Code Developer's Kit for Flash SIMM modules
- PC (PCMCIA) 68 pin, Type I Flash cards
- PC (PCMCIA) ATA Flash cards
- PC (JEDEC) 88 pin, Type I DRAM cards
- PC (PCMCIA) specialty and I/O cards including V.34 fax/modems

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