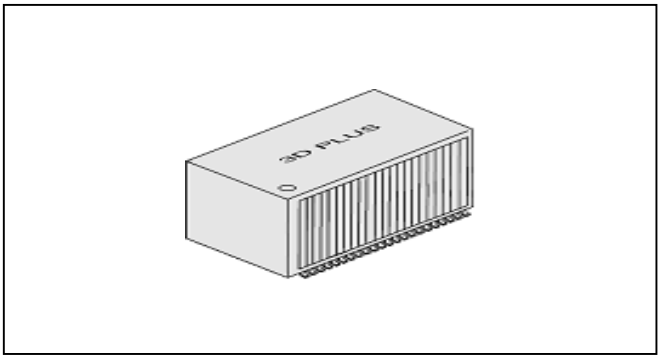
Static Ram MODULE

MEMORY MODULE
SRAM 512Kx40-SOP

3DSR20M40VS6507

20 Mbit SRAM organized as 512Kx40, based on 256Kx16



Features

- Fast Access Time : 12ns.
- Power Supply 3.3V
- Radiation Characteristics:
  - Total Dose: 100Krad(Si)
  - Immune to SEL (LET=110MeV.cm²/mg at 85°C)
- TTL Compatible Input and Outputs.
- Three State Outputs
- Fully Static Operation
  - No clock or refresh required
- Integrate 100nF Decoupling capacitors
- Centre Power/Ground Pin Configuration
- Available Temperature Range:
  - 0°C to 70°C
  - -40°C to +85°C
  - -55°C to +125°C
- Available with screening option for high reliability application (Space, etc…)

General Description

The 3DSR20M40VS6507 is a high-speed highly integrated Static Random Access Memory containing 20, 971, 520 bit.

It is organized as two 256 x 40bit banks, each bank has 2 group of chip select signals #CS and #WE to control the 32bit and 8bit independently .

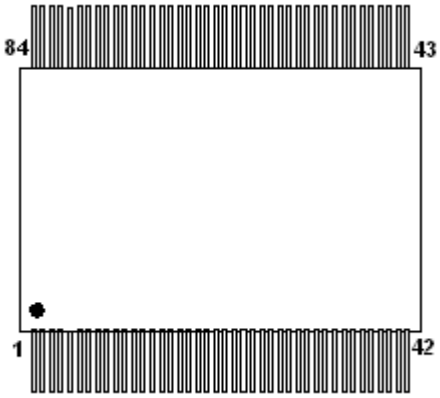
The 3DSR20M40VS6507 uses 40 common input and output lines and has an output enable pin which operates faster than address access time at read cycle.

The device is manufactured using 3D-PLUS well known MCM-V patented technology designed for high speed circuit applications. It is particularity well suited for use in high reliability, high performance and high density system applications, such as solid state mass recorder, server or workstation.

The 3DSR20M40VS6507 is packaged in a 84 pin SOP.

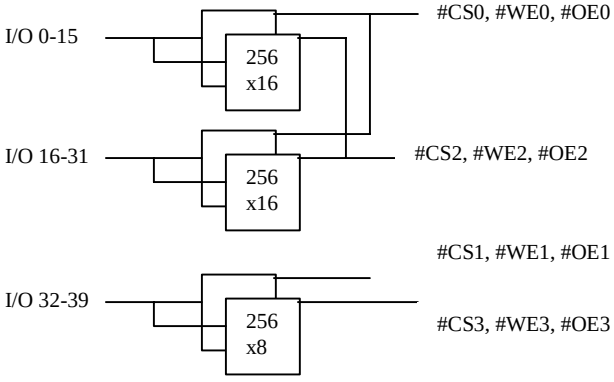
Pin Assignment (Top View)

SOP 84 (Pitch : 0.508 mm)



1	A9	22	Vss	43	A17	64	#CS2
2	A8	23	NC	44	A16	65	#CS1
3	A7	24	NC	45	A15	66	#CS0
4	A6	25	Vcc	46	I/O15	67	NC
5	A5	26	Vcc	47	I/O31	68	I/O35
6	I/O7	27	Vcc	48	I/O14	69	I/O19
7	I/O23	28	Vcc	49	I/O30	70	I/O3
8	I/O39	29	Vcc	50	I/O13	71	I/O34
9	I/O6	30	I/O27	51	I/O29	72	I/O18
10	I/O22	31	I/O11	52	I/O12	73	I/O2
11	I/O38	32	I/O26	53	I/O28	74	I/O33
12	I/O5	33	I/O10	54	#OE3	75	I/O17
13	I/O21	34	I/O25	55	#OE2	76	I/O1
14	I/O37	35	I/O9	56	#OE1	77	I/O32
15	I/O4	36	I/O24	57	#OE0	78	I/O16
16	I/O20	37	I/O8	58	#WE0	79	I/O0
17	I/O36	38	A14	59	#WE1	80	A4
18	Vss	39	A13	60	#WE2	81	A3
19	Vss	40	A12	61	#WE3	82	A2
20	Vss	41	A11	62	NC	83	A1
21	Vss	42	A10	63	#CS3	84	A0

FUNCTIONAL BLOCK DIAGRAM



(All other signals are common to the six devices)

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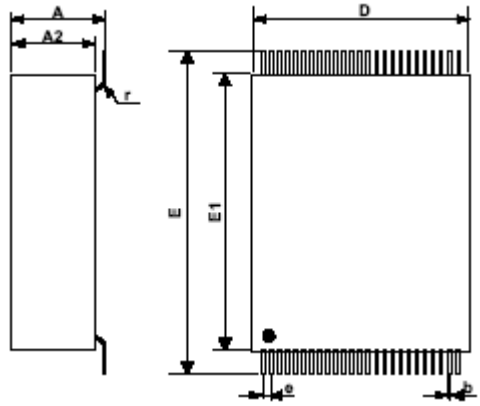
Mechanical Drawing



	Min	Max
A	8.85 Max.	
A2	7.3 Max.	
D	26.90	27.10
E	28.55	28.95
E1	26.05	26.25
b	0.20	
e	0.508	
r	0.40	
Dimension (mm)		

Max. weight : 10.5gr.

DC OPERATING CONDITIONS

Parameter	Symbol	Min	Typ	Max	Unit
Supply Voltage	V_{DD}	3.0	3.3	3.6	V
Input High Voltage	V_{IH}	2.0		V_{CC}+0.3	V
Input Low Voltage	V_{IL}	-0.3		0.8	
Output High Voltage	V_{OH}	2.4		-	V
Output Low Voltage	V_{OL}	-		0.4	V

Note :
Permanent device damage may occur if "ABSOLUTE MAXIMUM RATINGS" are exceeded.
Functional operation should be restricted to recommended operating condition.
Exposure to higher than recommended voltage for extended periods of time could affect device reliability

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Voltage on any pin relative to V_{SS}	V_T	-0.5 to 4.6	V
Storage temperature	T_{STG}	-65 to +150	°C
Power dissipation	P_D	3	W

DC Characteristics

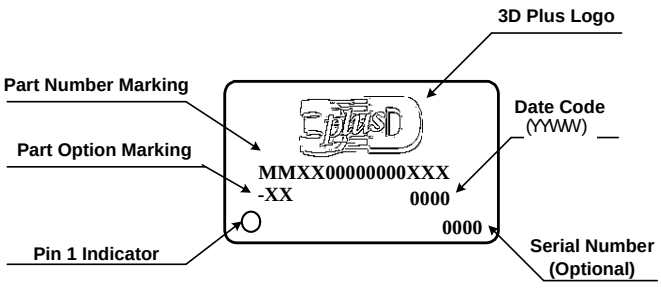
Parameter	Symbol	Max	Unit
Operating Current (One bank active)	I_{CC}	450	mA
TTL Standby Current	I_{SB}	240	mA
CMOS Standby Current	I_{SB1}	30	mA

3DSR20M40VS6507 - X X

Temperature Range
C = 0°C ~ +70°C
I = -40°C ~ +85°C
M = -55°C ~ +125°C

Quality Level
N = Commercial Grade
B = Industrial Grade
S = Space Grade

Module Marking



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