12

- R A T 120, 140, 150, 200, 250, 300
- JEDEC A P
  - 32 , H C , 0.600" DIP (P 300)
  - 32 , H C , 0.400" SOJ (P 101)
- C , I , M , T R
- MIL-STD-883 C , D , A ,
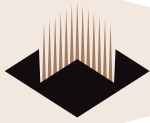- W E 10,000 C
- D R , 25 C, 10 Y
- L P CMOS O ,

- A , P W O ,
  - I A D L 128 B
  - I C T
- P W C T 10 M .
- D P , E W , D ,
- H S D P ,
- TTL C , I O

This product is subject to change without notice.

1

A0-16	Address Inputs
I/O0-7	Data Input/Output
CS#	Chip Selects
OE#	Output Enable
WE#	Write Enable
V$_{CC}$	+5.0v Power
V$_{SS}$	Ground

Pin			Pin
NC	1	32	V$_{CC}$
A16	2	31	WE#
A15	3	30	NC
A12	4	29	A14
A7	5	28	A13
A6	6	27	A8
A5	7	26	A9
A4	8	25	A11
A3	9	24	OE#
A2	10	23	A10
A1	11	22	CS#
A0	12	21	I/O7
I/O0	13	20	I/O6
I/O1	14	19	I/O5
I/O2	15	18	I/O4
V$_{SS}$	16	17	I/O3

Absolute Maximum Ratings

Parameter	Symbol		Unit
Operating Temperature	T_A	-55 to +125	°C
Storage Temperature	T_{STG}	-65 to +150	°C
Signal Voltage Relative to GND	V_G	-0.6 to + 6.25	V
Voltage on OE# and A9		-0.6 to +13.5	V

NOTE:

Stresses above those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. This is a stress rating only and functional operation of the device at these or any other conditions above those indicated in the operational sections of this specification is not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

Operating Conditions

Parameter	Symbol	Min	Max	Unit
Supply Voltage	V_{CC}	4.5	5.5	V
Input High Voltage	V_{IH}	2.0	V_{CC} + 0.3	V
Input Low Voltage	V_{IL}	-0.5	+0.8	V
Operating Temp. (Mil.)	T_A	-55	+125	°C
Operating Temp. (Ind.)	T_A	-40	+85	°C

Mode Selection

CS#	OE#	WE#	Mode	Data I/O
H	X	X	Standby	High Z
L	L	H	Read	Data Out
L	H	L	Write	Data In
X	H	X	Out Disable	High Z/Data Out
X	X	H	Write	
X	L	X	Inhibit	

Capacitance $T_A = +25$°C

Parameter	Symbol	Conditions	Max	Unit
Input Capacitance	C_{IN}	V_{IN} = 0 V, f = 1MHz	20	pF
Output Capacitance	C_{OUT}	$V_{I/O}$ = 0 V, f = 1MHz	20	pF

This parameter is guaranteed by design but not tested.

DC Characteristics V_{CC} = 5.0V, V_{SS} = 0V, -55°C $\leq T_A \leq$ +125°C

Parameter	Symbol	Conditions	Min	Max	Unit
Input Leakage Current	I_{LI}	V_{CC} = 5.5, V_{IN} = GND to V_{CC}		10	µA
Output Leakage Current	I_{LO}	CS# = V_{IH}, OE# = V_{IH}, V_{OUT} = GND to V_{CC}		10	µA
Operating Supply Current	I_{CC}	CS# = V_{IL}, OE# = V_{IH}, f = 5MHz, V_{CC} = 5.5		80	mA
Standby Current	I_{SB}	CS# = V_{IH}, OE# = V_{IH}, f = 5MHz, V_{CC} = 5.5		0.625	mA
Output Low Voltage	V_{OL}	I_{OL} = 2.1mA, V_{CC} = 4.5V		0.45	V
Output High Voltage	V_{OH}	I_{OH} = -400µA, V_{CC} = 4.5V	2.4		V

NOTE: DC test conditions: V_{IH} = V_{CC} -0.3V, V_{IL} = 0.3V

AC Test Conditions
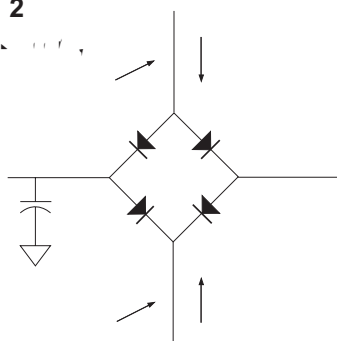
Parameter	Value	Unit
Input Pulse Levels	V_{IL} = 0, V_{IH} = 3.0	V
Input Rise and Fall	5	ns
Input and Output Reference Level	1.5	V
Output Timing Reference Level	1.5	V

Notes: V_Z is programmable from -2V to +7V.
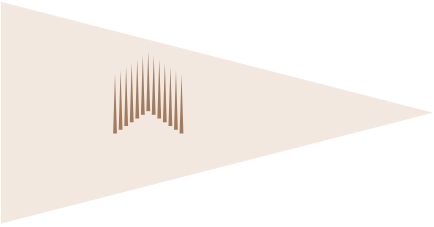
I_{OL} & I_{OH} programmable from 0 to 16mA.

Tester Impedance Z0 = 75.
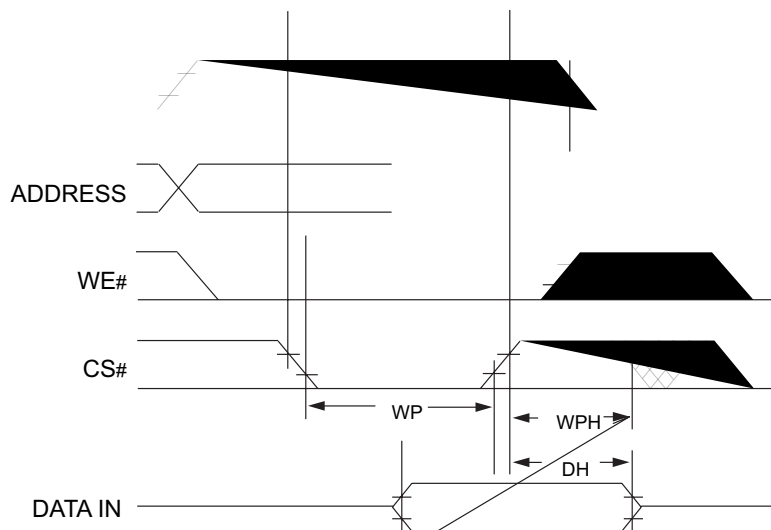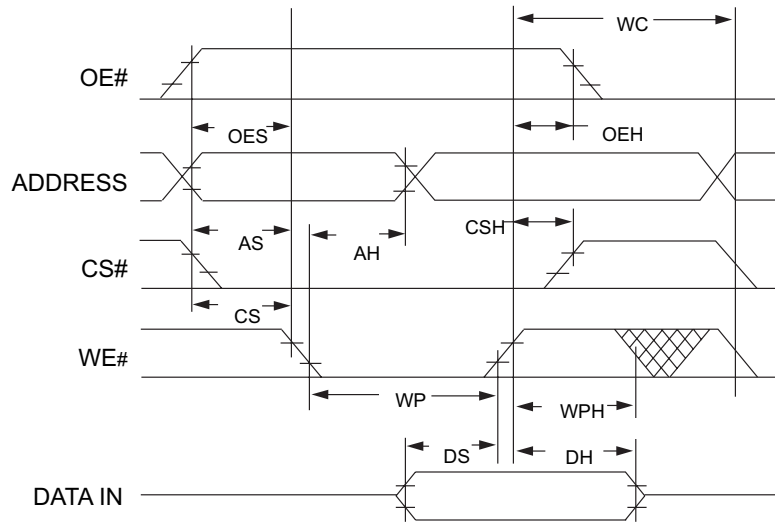
V_Z is typically the midpoint of V_{OH} and V_{OL}.

I_{OL} & I_{OH} are adjusted to simulate a typical resistive load circuit.
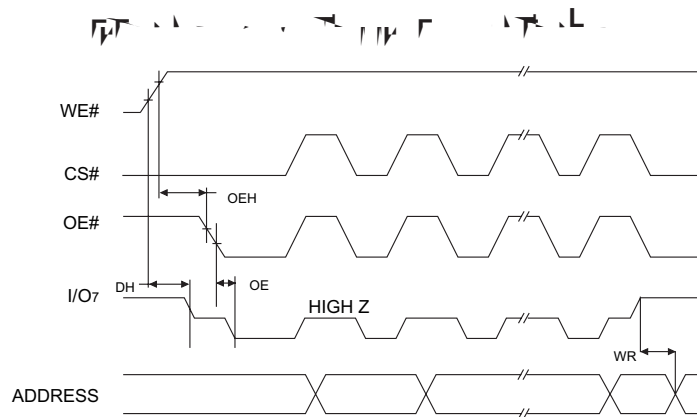
ATE tester includes jig capacitance.

T   WME128K8-XXX

I/O7. O

Pa a	S b	M.	Ma	U_
Data Hold Time	tdh	10		ns
OE# Hold Time	toeh	10		ns
OE# To Output Valid	toe		55	ns
Write Recovery Time	twr	0		ns

WE#

CS#

OE#

OEH

I/O7   DH   OE   HIGH Z   WR

ADDRESS

TOGGLE BIT: I   DATA# P

O   I/O6   , I/O6   . R

S b	Pa a	M.	Ma	U_	(1)
tDH	Data Hold Time	10		ns	
tOEH	OE Hold Time	10		ns	
tOE	OE to Output Delay			ns	
tOEHP	OE High Pulse	150		ns	
tWR	Write Recovery Time	0		ns	
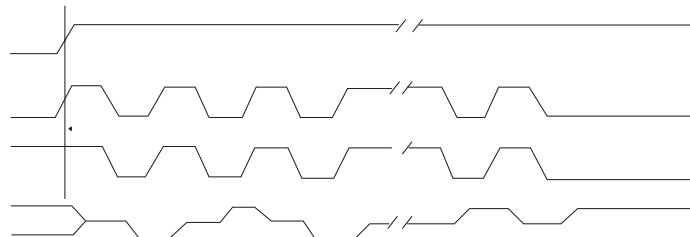
NOTE:
1. Toggling either OE# or CS# or both OE# and CS# will operate toggle bit.
2. Beginning and ending state of I/O6 will vary
3. Any address location may be used but the address should not vary.

T   WME128K8-XXX
              128
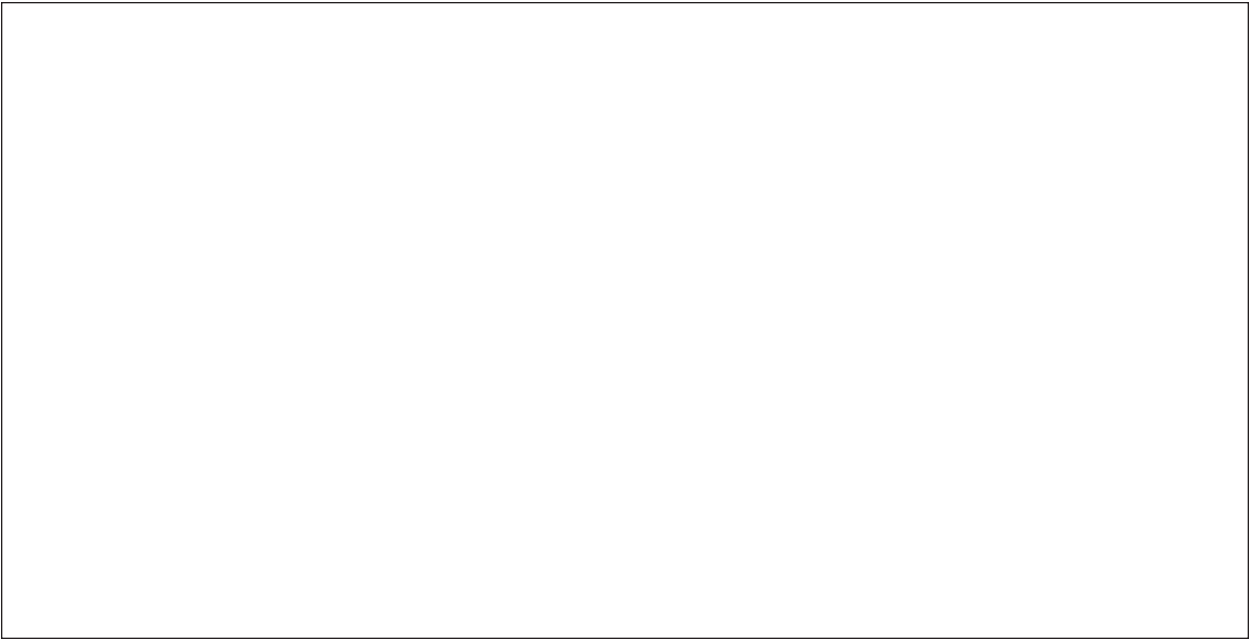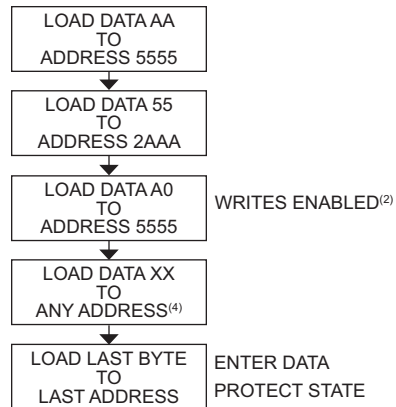
. S

_f   . A

. I   150

. E

.T

T   _f

(1)

```
┌─────────────────┐
│  LOAD DATA AA   │
│       TO        │
│  ADDRESS 5555   │
└────────┬────────┘
         ▼
┌─────────────────┐
│  LOAD DATA 55   │
│       TO        │
│  ADDRESS 2AAA   │
└────────┬────────┘
         ▼
┌─────────────────┐
│  LOAD DATA A0   │
│       TO        │              WRITES ENABLED(2)
│  ADDRESS 5555   │
└────────┬────────┘
         ▼
┌─────────────────┐
│  LOAD DATA XX   │
│       TO        │
│  ANY ADDRESS(4) │
└────────┬────────┘
         ▼
┌─────────────────┐
│ LOAD LAST BYTE  │              ENTER DATA
│       TO        │              PROTECT STATE
│  LAST ADDRESS   │
└─────────────────┘
```

NOTES:

1. Data Format: I/O7 - I/O0 (Hex);
    Address Format: A_{16} - A_0 (Hex).
2. Write Protect state will be activated at end of write even if no other data is loaded.
3. Write Protect state will be deactivated at end of write period even if no other data is loaded.
4. 1 to 128 bytes of data to be loaded.

W, E, D, C.   _f_ , , ,.
J   2004   8   W, E, D, C, (602) 437-1520 . . .
R . 5

(1)

```
LOAD DATA AA
TO
ADDRESS 5555
        ↓
LOAD DATA 55
TO
ADDRESS 2AAA
        ↓
LOAD DATA 80
TO
ADDRESS 5555
        ↓
LOAD DATA AA
TO
ADDRESS 5555
        ↓
LOAD DATA 55
TO
ADDRESS 2AAA
        ↓
LOAD DATA 20
TO
ADDRESS 5555
        ↓
LOAD DATA XX
TO
ANY ADDRESS(4)
        ↓
LOAD LAST BYTE
TO
LAST ADDRESS
```
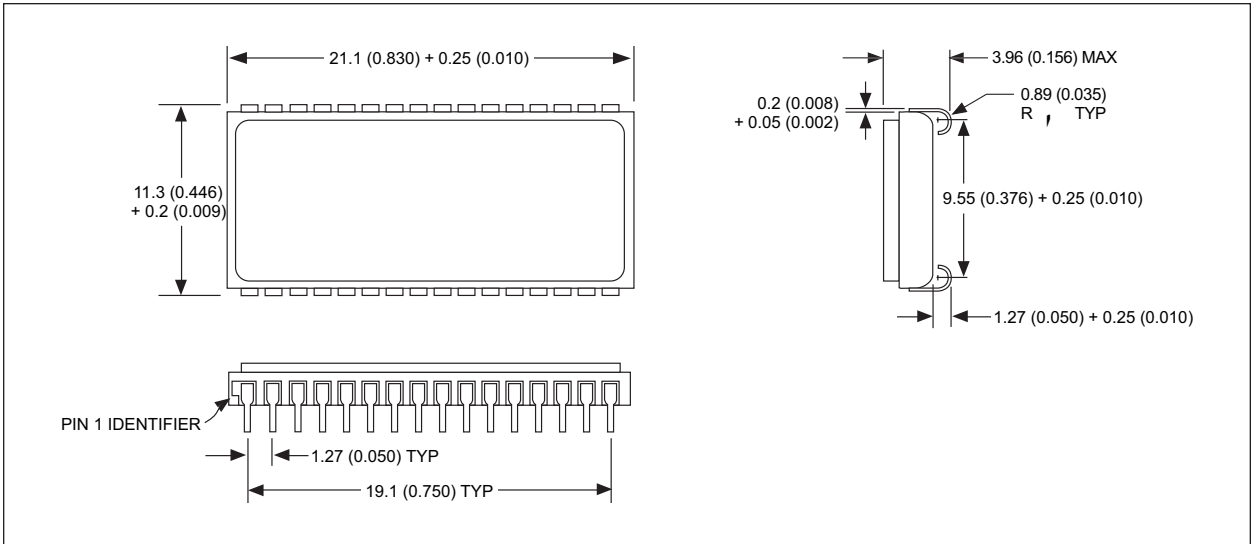
EXIT DATA
PROTECT STATE(3)

A
M
T
O
EEPROM

WME128K8-XXX

D

PROM

WME128K8-XXX. T

A Vcc   3.8V
5

NOTES:
1. Data Format: I/O7 - I/O0 (Hex);
    Address Format: A16 - A0 (Hex).
2. Write Protect state will be activated at end of write even if
    no other data is loaded.
3. Write Protect state will be deactivated at end of write
    period even if no other data is loaded.
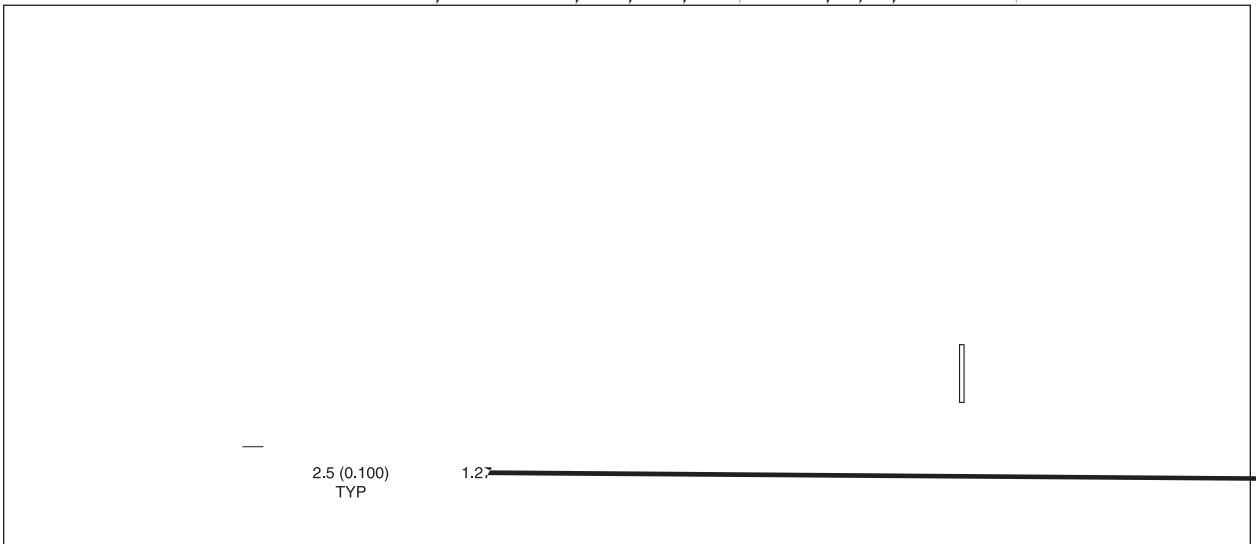4. 1 to 128 bytes of data may be loaded.

101   2

21.1 (0.830) + 0.25 (0.010)

11.3 (0.446)
+ 0.2 (0.009)

0.2 (0.008)
+ 0.05 (0.002)

3.96 (0.156) MAX

0.89 (0.035)
R   TYP

9.55 (0.376) + 0.25 (0.010)

1.27 (0.050) + 0.25 (0.010)

PIN 1 IDENTIFIER

1.27 (0.050) TYP

19.1 (0.750) TYP

ALL LINEAR DIMENSIONS ARE MILLIMETERS AND PARENTHETICALLY IN INCHES

00   2
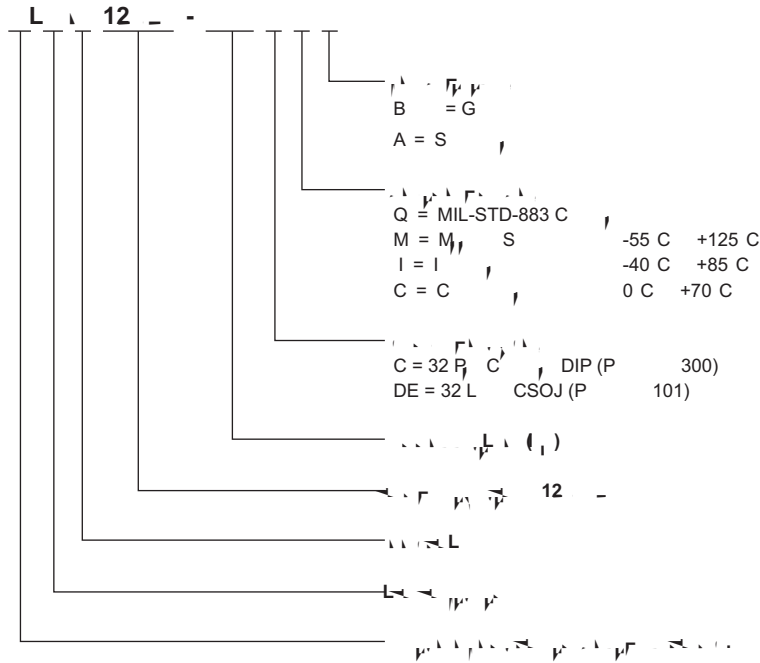
2.5 (0.100)
TYP

1.2

L   12   -

B   = G
A = S

Q = MIL-STD-883 C
M = M   S   -55 C   +125 C
I = I   -40 C   +85 C
C = C   0 C   +70 C

C = 32 P   C   , DIP (P   300)
DE = 32 L   CSOJ (P   101)

12 -

128K 8 EEPROM M		300	32	DIP (C)	5962-96796 01HYX
128K 8 EEPROM M		250	32	DIP (C)	5962-96796 02HYX
128K 8 EEPROM M		200	32	DIP (C)	5962-96796 03HYX
128K 8 EEPROM M		150	32	DIP (C)	5962-96796 04HYX
128K 8 EEPROM M		140	32	DIP (C)	5962-96796 05HYX
128K 8 EEPROM M		120	32	DIP (C)	5962-96796 06HYX
128K 8 EEPROM M		300	32	SOJ (DE)	5962-96796 01HXX
128K 8 EEPROM M		250	32	SOJ (DE)	5962-96796 02HXX
128K 8 EEPROM M		200	32	SOJ (DE)	5962-96796 03HXX
128K 8 EEPROM M		150	32	SOJ (DE)	5962-96796 04HXX
128K 8 EEPROM M		140	32	SOJ (DE)	5962-96796 05HXX
128K 8 EEPROM M		120	32	SOJ (DE)	5962-96796 06HXX