

OKI Semiconductor

FEDR26V25605J-02-03

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MR26V25605J

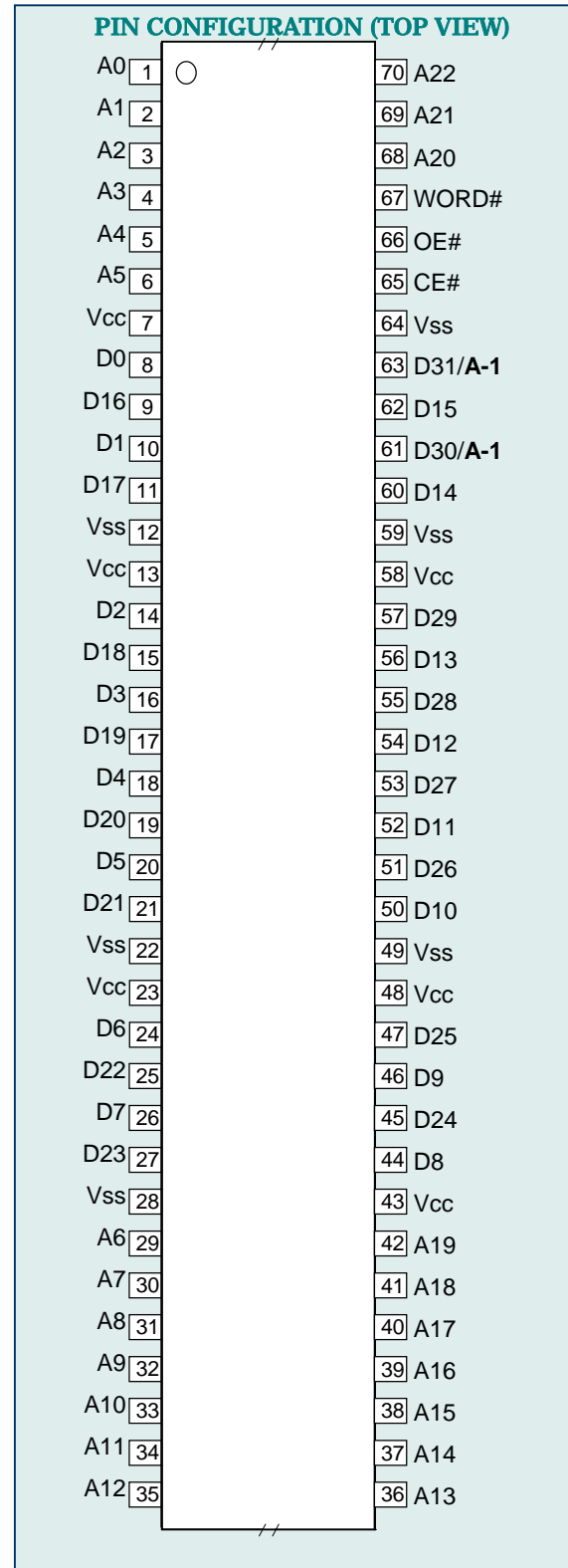
8M-Word × 32-Bit or 16M-Word × 16-Bit **P2ROM**

FEATURES

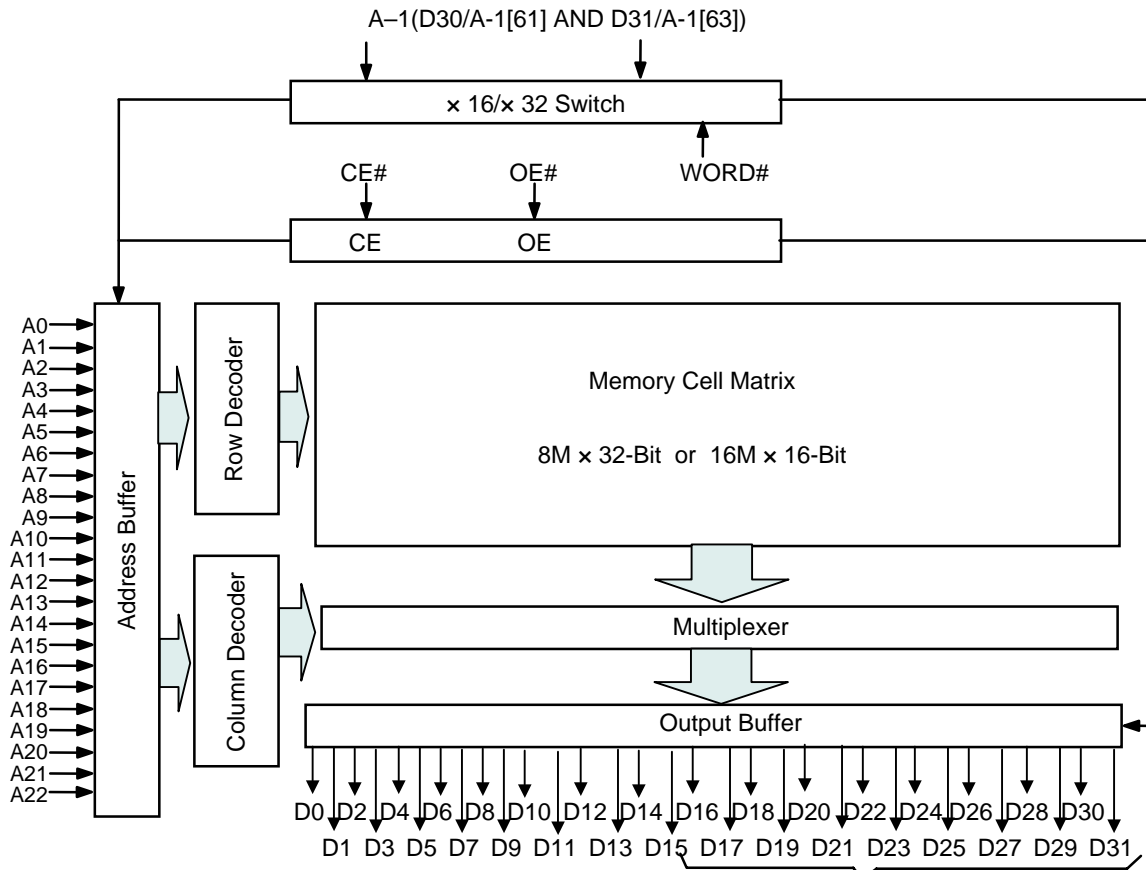
- 8,388,608-word × 32-bit/16,777,216-word × 16-bit electrically switchable configuration
- 3.0 V to 3.6 V power supply
- Access time 90 ns MAX
- Operating current 60 mA MAX
- Standby current 50 μA MAX
- Input/Output TTL compatible
- Three-state output

PACKAGES

- MR26V25605J-xxxMB
 70-pin plastic SSOP (P-SSOP70-500-0.80-K-MC)



BLOCK DIAGRAM



In 16-bit output mode, these pins are placed in a high-Z state and pin D31, D30 functions as the A-1 address pin.

PIN DESCRIPTIONS

Pin name	Functions
D31 / A-1, D30/A-1	Data output / Address input
A0 to A22	Address inputs
D0 to D29	Data outputs
CE#	Chip enable input
OE#	Output enable input
WORD#	Double word - Word select input
V _{CC}	Power supply voltage
V _{SS}	Ground

FUNCTION TABLE

Mode	CE#	OE#	WORD#	V _{CC}	D0 to D15	D16 to D29	D30/A-1, D31/A-1
Read (32-Bit)	L	L	H	3.3 V	D _{OUT}		
Read (16Bit)	L	L	L		D _{OUT}	Hi-Z	L/H
Output disable	L	H	H		Hi-Z		*
			L				
Standby	H	*	H		Hi-Z		*
			L				

*: Don't Care (H or L)

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Condition	Value	Unit
Operating temperature under bias	T _a	—	0 to 70	°C
Storage temperature	T _{stg}	—	-55 to 125	°C
Input voltage	V _I	relative to V _{SS}	-0.5 to V _{CC} +0.5	V
Output voltage	V _O		-0.5 to V _{CC} +0.5	V
Power supply voltage	V _{CC}		-0.5 to 5	V
Power dissipation per package	P _D	T _a = 25°C	1.0	W
Output short circuit current	I _{OS}	—	10	mA

RECOMMENDED OPERATING CONDITIONS

(T_a = 0 to 70°C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
V _{CC} power supply voltage	V _{CC}	V _{CC} = 3.0 to 3.6 V	3.0	—	3.6	V
Input "H" level	V _{IH}		2.2	—	V _{CC} +0.5*	V
Input "L" level	V _{IL}		-0.5**	—	0.6	V

Voltage is relative to V_{SS}.

* : V_{CC}+1.5V(Max.) when pulse width of overshoot is less than 10ns.

** : -1.5V(Min.) when pulse width of undershoot is less than 10ns.

PIN CAPACITANCE

(V_{CC} = 3.3 V, T_a = 25°C, f = 1 MHz)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Input	C _{IN1}	V _I = 0 V	—	—	30	pF
WORD#	C _{IN2}		—	—	400	
Output	C _{OUT}	V _O = 0 V	—	—	20	

ELECTRICAL CHARACTERISTICS

DC Characteristics

(V_{CC} = 3.3 V ± 0.3 V, Ta = 0 to 70°C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Input leakage current	I _{LI}	V _I = 0 to V _{CC}	—	—	20	μA
Output leakage current	I _{LO}	V _O = 0 to V _{CC}	—	—	20	μA
V _{CC} power supply current (Standby)	I _{CCSC}	CE# = V _{CC}	—	—	50	μA
	I _{CCST}	CE# = V _{IH}	—	—	1	mA
V _{CC} power supply current (Read)	I _{CCA1}	CE# = V _{IL} OE# = V _{IH} tc = 90 ns	—	—	60	mA
Input "H" level	V _{IH}	—	2.2	—	V _{CC} +0.5*	V
Input "L" level	V _{IL}	—	-0.5**	—	0.6	V
Output "H" level	V _{OH}	I _{OH} = -2 mA	2.4	—	—	V
Output "L" level	V _{OL}	I _{OL} = 2 mA	—	—	0.4	V

Voltage is relative to V_{SS}.

* : V_{CC}+1.5V(Max.) when pulse width of overshoot is less than 10ns.

** : -1.5V(Min.) when pulse width of undershoot is less than 10ns.

AC Characteristics

(V_{CC} = 3.3 V ± 0.3 V, Ta = 0 to 70°C)

Parameter	Symbol	Condition	Min.	Max.	Unit
Address cycle time	t _c	—	90	—	ns
Address access time	t _{ACC}	CE# = OE# = V _{IL}	—	90	ns
CE# access time	t _{CE}	OE# = V _{IL}	—	90	ns
OE# access time	t _{OE}	CE# = V _{IL}	—	40	ns
Output disable time	t _{CHZ}	OE# = V _{IL}	0	20	ns
	t _{OHZ}	CE# = V _{IL}	0	20	ns
Output hold time	t _{OH}	CE# = OE# = V _{IL}	0	—	ns

Measurement conditions

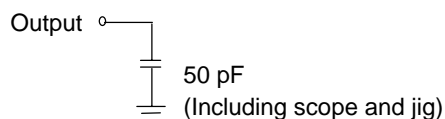
Input signal level----- 0 V/3 V

Input timing reference level----- 1/2V_{CC}

Output load----- 50 pF

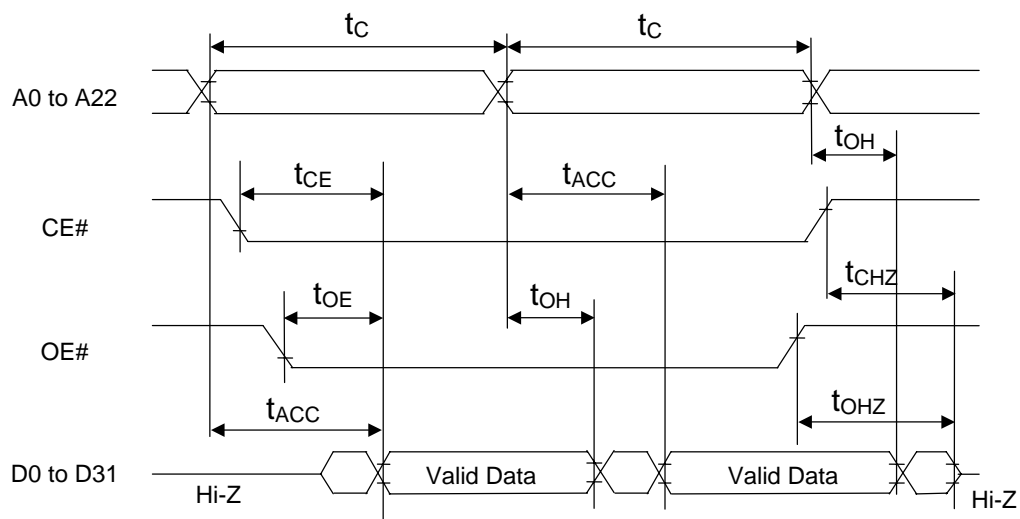
Output timing reference level----- 1/2V_{CC}

Output load

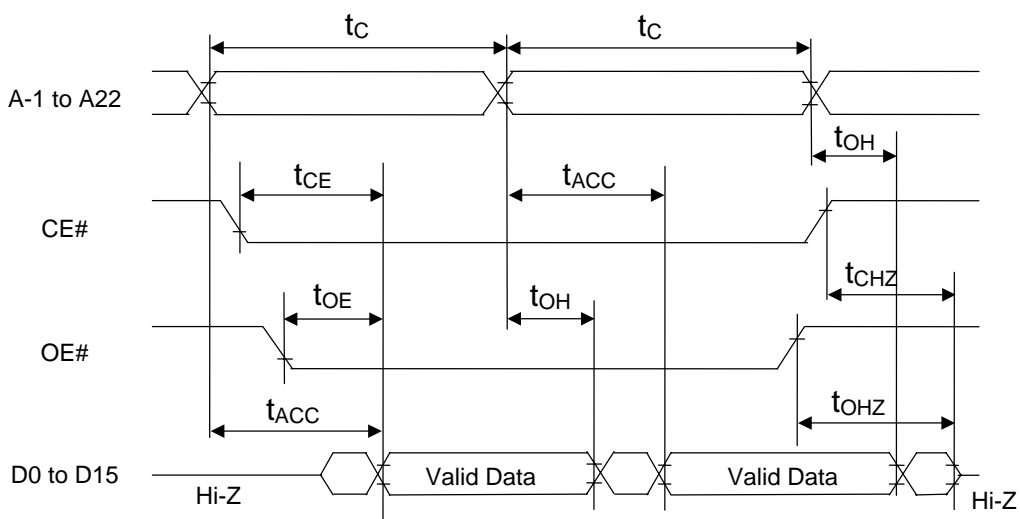


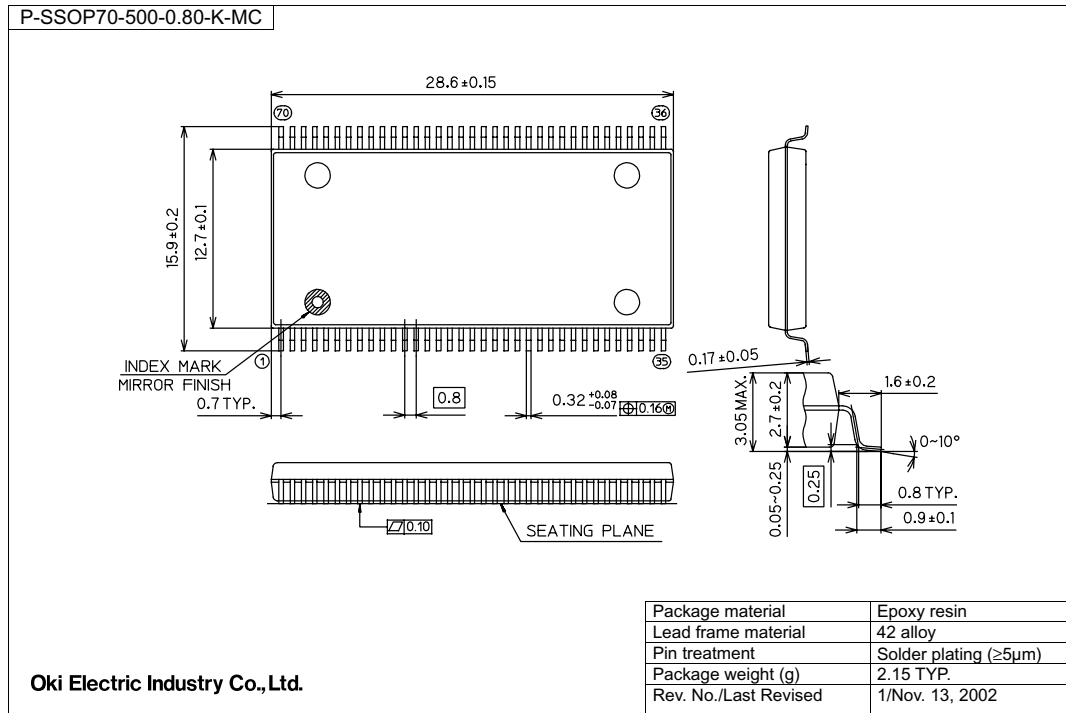
TIMING CHART (READ CYCLE)

32-Bit Read Mode (WORD# = V_{IH})



16-Bit Read Mode (WORD# = V_{IL})





(Unit: mm)

Notes for Mounting the Surface Mount Type Package

The surface mount type packages are very susceptible to heat in reflow mounting and humidity absorbed in storage. Therefore, before you perform reflow mounting, contact Oki's responsible sales person for the product name, package name, pin number, package code and desired mounting conditions (reflow method, temperature and times).

REVISION HISTORY

Document No.	Date	Page		Description
		Previous Edition	Current Edition	
FEDR26V25605J-02-01	Nov., 2002	–	–	Final edition 1
FEDR26V25605J-02-02	Jul. 31, 2003	4	4	Change tCHZ, tOHZ to 20ns
FEDR26V25605J-02-03	Jul. 9, 2004	3	3	Add P _D condition and I _{OS} = 10mA

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