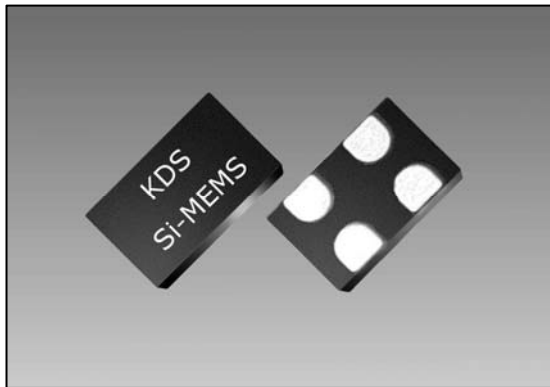


MO1602

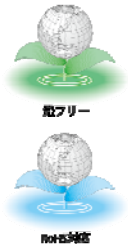


■特長

- 出力周波数: 3.57 MHz ~ 77.76 MHz
- 外形寸法:
2.0 x 1.6、2.5 x 2.0、3.2 x 2.5、5.0 x 3.2、7.0 x 5.0 mm
- 周波数許容偏差: $\pm 20 \times 10^{-6}$
- 低消費電流: +3.5 mA (typical, $f = 20$ MHz, $V_{dd} = +1.8V$)

■用途

- Ideal for DSC, DVC, DVR, IP CAM, Tablets, e-Books, SSD, GPON, EPON etc.
- Ideal for high-speed serial protocols such as:
USB, SATA, SAS, Firewire, 100M/1G/10G Ethernet etc.



■一般仕様

項目	記号	Min.	Typ.	Max.	単位	条件
出力周波数範囲	f	3.57	-	77.76	MHz	詳しい対応周波数については、データシートを参照ください。
電源電圧	V _{dd}	+1.62	+1.8	+1.98	V	
		+2.25	+2.5	+2.75		
		+2.52	+2.8	+3.08		
		+2.7	+3.0	+3.3		
		+2.97	+3.3	+3.63		
		+2.25	-	+3.63		
動作温度範囲	T _{use}	-20	-	+70	°C	Extended Commercial
		-40	-	+85		Industrial
周波数許容偏差	F _{stab}	-20	-	+20	$\times 10^{-6}$	+25°Cでの初期周波数偏差・経時変化(1年)、 温度特性、動作電源電圧範囲での電源電圧特性、負荷特性を含む。
		-25	-	+25		
		-50	-	+50		
消費電流	I _{dd}	-	+3.8	+4.5	mA	No load condition, $f = 20$ MHz, $V_{dd} = +2.8V \sim +3.3V$
		-	+3.7	+4.2		No load condition, $f = 20$ MHz, $V_{dd} = +2.5V$
		-	+3.5	+4.1		No load condition, $f = 20$ MHz, $V_{dd} = +1.8V$
OEディスプレイ電流	I _{od}	-	-	+4.2	mA	$V_{dd} = +2.5V \sim +3.3V$, OE = GND, output is Weakly Pulled Down
		-	-	+4.0		$V_{dd} = 1.8V$, OE = GND, output is Weakly Pulled Down
スタンバイ時電流	I _{std}	-	+2.6	+4.3	μA	$\overline{ST} = GND$, $V_{dd} = +2.8V \sim +3.3V$, Output is weakly pulled down
		-	+1.4	+2.5		$\overline{ST} = GND$, $V_{dd} = +2.5V$, Output is weakly pulled down
		-	+0.6	+1.3		$\overline{ST} = GND$, $V_{dd} = +1.8V$, Output is weakly pulled down
デューティサイクル	DC	45	-	55	%	All V _{dds}
0レベル電圧	V _{OL}	-	-	V _{dd} x 0.1	V	I _{OL} = +4.0 mA ($V_{dd} = +3.0V$ or +3.3V) I _{OL} = +3.0 mA ($V_{dd} = +2.8V$ and $V_{dd} = +2.5V$) I _{OL} = +2.0 mA ($V_{dd} = +1.8V$)
1レベル電圧	V _{OH}	V _{dd} x 0.9	-	-	V	I _{OH} = -4.0 mA ($V_{dd} = +3.0V$ or +3.3V) I _{OH} = -3.0 mA ($V_{dd} = +2.8V$ and $V_{dd} = +2.5V$) I _{OH} = -2.0 mA ($V_{dd} = +1.8V$)
立上り、立下り時間	T _r , T _f	-	1.0	2.0	ns	$V_{dd} = +2.5V, +2.8V, +3.0V$ or +3.3V, 20% ~ 80%
		-	1.3	2.5		$V_{dd} = +1.8V$, 20% ~ 80%
		-	-	2.0		$V_{dd} = +2.25V \sim +3.63V$, 20% ~ 80%
OE端子 0レベル入力電圧	V _{IL}	-	-	V _{dd} x 0.3	V	Pin 1, OE or \overline{ST}
OE端子 1レベル入力電圧	V _{IH}	V _{dd} x 0.7	-	-	V	Pin 1, OE or \overline{ST}
起動時間	T _{start}	-	-	5.0	ms	V _{dd} が定格最小値に達してからの時間
出力イネーブル時間 出力ディスプレイ時間	T _{oe}	-	-	138	ns	$f = 77.76$ MHz. For other frequencies, T _{oe} = 100 ns + 3 * cycles
レジューム時間	T _{resume}	-	-	5.0	ms	\overline{ST} 端子が50%のしきい値に達してからの時間
RMS ピリオドジッタ	T _{jitt}	-	1.8	3.0	ps	$f = 75$ MHz, $V_{dd} = +2.5V, +2.8V, +3.0V$ or +3.3V
		-	1.8	3.0		$f = 75$ MHz, $V_{dd} = +1.8V$
Peak-to-peak ピリオドジッタ	T _{pk}	-	12	25	ps	$f = 75$ MHz, $V_{dd} = +2.5V, +2.8V, +3.0V$ or +3.3V
		-	14	30		$f = 75$ MHz, $V_{dd} = +1.8V$
RMS 位相ジッタ (ランダム)	T _{phj}	-	0.5	0.9	ps	$f = 75$ MHz, Integration bandwidth = 900 kHz ~ 7.5 MHz
		-	1.3	2.0		$f = 75$ MHz, Integration bandwidth = 12 kHz ~ 20 MHz

この他の仕様、または特殊仕様については営業窓口にお問合わせください。

MO1602

■外形寸法とランドパターン(参考)

Package Size – Dimensions (Unit: mm) ^[1]	Recommended Land Pattern (Unit: mm) ^[2]												
<p>2.0 x 1.6 x 0.75 mm</p> <table border="1" style="margin-left: auto; margin-right: auto; font-size: 8px;"> <thead> <tr> <th colspan="2">Pin Connections</th> </tr> <tr> <th>Pin No.</th> <th>Connection</th> </tr> </thead> <tbody> <tr> <td>#1</td> <td>OE/ST</td> </tr> <tr> <td>#2</td> <td>GND</td> </tr> <tr> <td>#3</td> <td>Output</td> </tr> <tr> <td>#4</td> <td>Vdd</td> </tr> </tbody> </table>	Pin Connections		Pin No.	Connection	#1	OE/ST	#2	GND	#3	Output	#4	Vdd	
Pin Connections													
Pin No.	Connection												
#1	OE/ST												
#2	GND												
#3	Output												
#4	Vdd												
<p>2.5 x 2.0 x 0.75 mm</p> <table border="1" style="margin-left: auto; margin-right: auto; font-size: 8px;"> <thead> <tr> <th colspan="2">Pin Connections</th> </tr> <tr> <th>Pin No.</th> <th>Connection</th> </tr> </thead> <tbody> <tr> <td>#1</td> <td>OE/ST</td> </tr> <tr> <td>#2</td> <td>GND</td> </tr> <tr> <td>#3</td> <td>Output</td> </tr> <tr> <td>#4</td> <td>Vdd</td> </tr> </tbody> </table>	Pin Connections		Pin No.	Connection	#1	OE/ST	#2	GND	#3	Output	#4	Vdd	
Pin Connections													
Pin No.	Connection												
#1	OE/ST												
#2	GND												
#3	Output												
#4	Vdd												
<p>3.2 x 2.5 x 0.75 mm</p> <table border="1" style="margin-left: auto; margin-right: auto; font-size: 8px;"> <thead> <tr> <th colspan="2">Pin Connections</th> </tr> <tr> <th>Pin No.</th> <th>Connection</th> </tr> </thead> <tbody> <tr> <td>#1</td> <td>OE/ST</td> </tr> <tr> <td>#2</td> <td>GND</td> </tr> <tr> <td>#3</td> <td>Output</td> </tr> <tr> <td>#4</td> <td>Vdd</td> </tr> </tbody> </table>	Pin Connections		Pin No.	Connection	#1	OE/ST	#2	GND	#3	Output	#4	Vdd	
Pin Connections													
Pin No.	Connection												
#1	OE/ST												
#2	GND												
#3	Output												
#4	Vdd												
<p>5.0 x 3.2 x 0.75 mm</p> <table border="1" style="margin-left: auto; margin-right: auto; font-size: 8px;"> <thead> <tr> <th colspan="2">Pin Connections</th> </tr> <tr> <th>Pin No.</th> <th>Connection</th> </tr> </thead> <tbody> <tr> <td>#1</td> <td>OE/ST</td> </tr> <tr> <td>#2</td> <td>GND</td> </tr> <tr> <td>#3</td> <td>Output</td> </tr> <tr> <td>#4</td> <td>Vdd</td> </tr> </tbody> </table>	Pin Connections		Pin No.	Connection	#1	OE/ST	#2	GND	#3	Output	#4	Vdd	
Pin Connections													
Pin No.	Connection												
#1	OE/ST												
#2	GND												
#3	Output												
#4	Vdd												

MO1602

■外形寸法とランドパターン(参考)

Package Size – Dimensions (Unit: mm) ^[1]	Recommended Land Pattern (Unit: mm) ^[2]										
<p>7.0 x 5.0 x 0.90 mm</p> <table border="1" style="margin-left: auto; margin-right: auto; font-size: small;"> <thead> <tr> <th>Pin No.</th> <th>Connection</th> </tr> </thead> <tbody> <tr> <td>#1</td> <td>OE/ST</td> </tr> <tr> <td>#2</td> <td>GND</td> </tr> <tr> <td>#3</td> <td>Output</td> </tr> <tr> <td>#4</td> <td>Vdd</td> </tr> </tbody> </table>	Pin No.	Connection	#1	OE/ST	#2	GND	#3	Output	#4	Vdd	
Pin No.	Connection										
#1	OE/ST										
#2	GND										
#3	Output										
#4	Vdd										

Notes:

1. 印字: Y は製造場所、XXXX は製造ロット番号を表します。“Y”は製品の製造場所により異なります。
2. Vdd と GND の間には 0.1μF のコンデンサの使用を推奨致します。