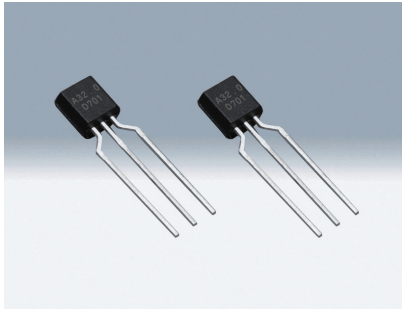


Crystal Oscillators

DLO555MBA



■ Features

- Small crystal oscillator in TO92 package
- Built-in bypass capacitor to improve noise resistance
- No PLL, No multiplier in oscillation circuit (The divider circuit, some cases be used)
- High-speed oscillation start up time(1ms)
- CMOS Level Output

■ Type D L O 5 5 5 M B A

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

- ① D : Corporate name (Daishinku)
- ② L : Lead type
- ③ O : SPXO
- ④, ⑤ 5 : Dimensions
- ⑥ 5 : 3 terminals
- ⑦ M : Mold type
- ⑧ B : Vcc : 5V, CMOS Level Output
- ⑨ A : Improved impact electric field resistance



■ Applications

- Gaming equipment
- Industrial equipment

■ Absolute Maximum Ratings

Item	Legend	Spec.	Unit
Supply Voltage	V _{CC}	-0.5 to +6.0	V
Output Pin Voltage	V _{OUT}	-0.5 to V _{CC} +0.5	V
Output Pin Current	I _{OUT}	10	mA
Storage Temperature Range	T _{str}	-40 to +105	°C

■ Recommended Operating Conditions

Item	Legend	min.	typ.	max.	Unit
Supply Voltage	V _{CC}	3.0	5.0	5.5	V
Load Condition	L _{CMOS}	-	-	15	pF
				30	
Operating Temperature Range	T _{opr}	-10	-	+85	°C

■ Standard Specification

Item	Legend	Spec.			Unit	Condition
		min.	typ.	max.		
Output Frequency Range	f ₀	1.5	-	54	MHz	L _{CMOS} : 30pF
Frequency Tolerance	f _{tol}	-100	-	+100	×10 ⁻⁶	T _{opr} =-10 to +85°C V _{CC} =+3.0 to +5.5V
		-50		+50		
Aging	-	-	-	±5	×10 ⁻⁶ /year	
Current Consumption	I _{CC}	-	-	8	mA	No load
Symmetry	SYM	45	-	55	%	50% V _{CC} level
0 Level Output Voltage	V _{OL}	-	-	V _{CC} ×0.1	V	
1 Level Output Voltage	V _{OH}	V _{CC} ×0.9	-	-	V	
Rise and Fall Time	t _r ,t _f	-	-	7.5	ns	L _{CMOS} : 30pF 20 to 80% V _{CC} level
Start Up Time	T _{start}	-	-	1	ms	t=0 at 90% V _{CC}
Phase Noise	-	-	-139	-	dBc/Hz	Offset 1kHz
		-	-156	-		Offset 100kHz
Period Jitter (1)	t _{RMS}	-	2.4	-	ps	σ
	t _{p-p}	-	20	-		Peak to peak
Total Jitter (1)	t _{TL}	-	34	-		t _{DJ} +n×t _{RJ} n=14.1 (BER=1×10 ⁻¹²) (2)
Phase Jitter (3)	t _{pj}	-	-	1		10MHz≤f ₀ <54MHz f ₀ offset 12kHz to 5MHz
						40MHz≤f ₀ ≤60MHz f ₀ offset 12kHz to 20MHz
Built-in Bypass Capacitors Capacitance	C _{bp}	-	0.1	-	μF	V _{CC} to GND capacitance

- (1) Measured WAVECREST DTS-2075
 (2) t_{DJ}: Deterministic jitter t_{RJ}: Random jitter
 (3) Measured Keysight Technologies E5052B

Consult our sales representative for other specifications.

*Moisture prevention packing is unnecessary. Moisture Sensitivity Level : Level 1 (IPC/JEDEC J-STD-033)

■ Dimensions

[mm]

