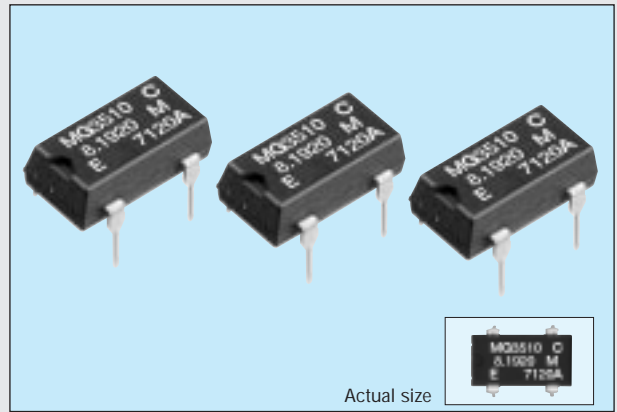


MULTI-OUTPUT CRYSTAL OSCILLATOR

MG-3510DC

- Simultaneous output.(1/1,1/2 output frequency ratio)
- Use of C-MOS IC assures low current consumption.
- Excellent shock resistance and environmental capability.
- Pin compatible with half size.

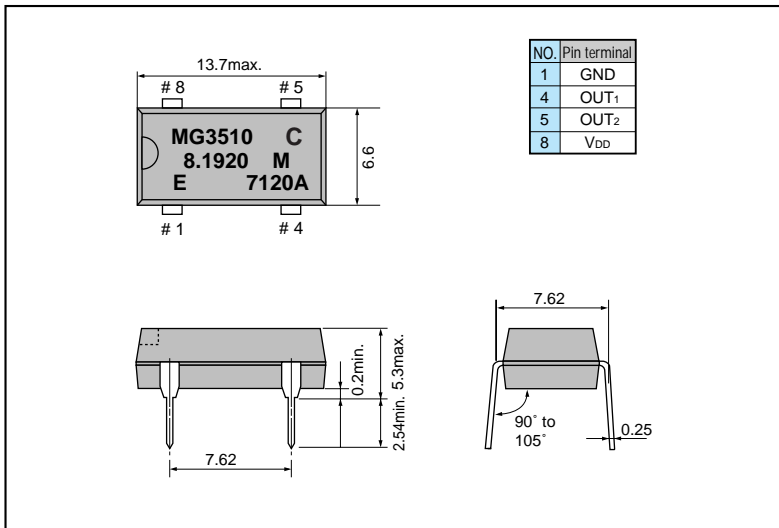


■ Specifications (characteristics)

Item	Symbol	Specifications	Remarks
Output frequency range	f ₁	6.0000 MHz to 13.0000 MHz	OUT ₁ (f ₁)
	f ₂	3.0000 MHz to 6.5000 MHz	OUT ₂ (f ₂ =f ₁ x 1/2)
Power source voltage	Max. supply voltage	V _{DD} -GND	-0.5V to +7.0V
	Operating voltage	V _{DD}	5.0V ±0.5V
Temperature range	Storage temperature	T _{STG}	-55°C to +100°C
	Operating temperature	T _{OPR}	-10°C to +70°C
Soldering condition	T _{SOL}	Under 260°C within 10 sec.Package should be less than 150°C	
Frequency stability	Δf/f ₀	±100ppm	
Current consumption	I _{OP}	7mA max.	No load, f ₁ =8.192MHz or 8.0000MHz
Duty	tw/t	40% to 60%	TTL load: 1.4V,C-MOS load :1/2V _{DD} level
"H" output voltage 1	V _{OH1}	0.9V _{DD} min.	I _{OH} = -1.0mA
"L" output voltage 1	V _{OL1}	0.1V _{DD} max.	I _{OL} =3.2mA
"H" output voltage 2	V _{OH2}	2.4V min.	I _{OH} = -1.0mA
"L" output voltage 2	V _{OL2}	0.4V max.	I _{OL} =3.2mA
	t _{sk}	20ns max.	Between OUT ₁ and OUT ₂
Output load condition (fan out)	TTL	N	2TTL max.
	C-MOS	CL	15pF. max.
Output rise time	t _{TLH}	10ns. max.	C-MOS load: 10%→90% V _{DD}
			TTL load: 0.4V→2.4V
Output fall time	t _{THL}	10ns. max.	C-MOS load: 90%→10% V _{DD}
			TTL load: 2.4V→0.4V
Oscillation start up time	t _{OSC}	10ns. max.	V _{DD} =4.5V voltage, t=0
Aging	f _a	±5ppm/year max.	T _a =25°C, V _{DD} =5V, first year
Shock resistance	S.R.	±20ppm max.	Three drops on a hard board from 75 cm or excitation test with 3000G x 0.3ms x 1/2sine wave in 3 directions

■ External dimensions

(Unit: mm)



■ Standard frequency

OUT ₁ (f ₁)	OUT ₂ (f ₂)
8.1920MHz	4.0960MHz
8.0000MHz	4.0000MHz