

ACT Series: ZTTCP_MG

Surface Mount Ceramic Resonator (Three pad, With built in Capacitor)

Features

- Three pad surface mount Ceramic resonator
- With built in capacitors
- Tight stability available
- Excellent temperature range
- Resonator vibrating mode: MG = Thickness Shear

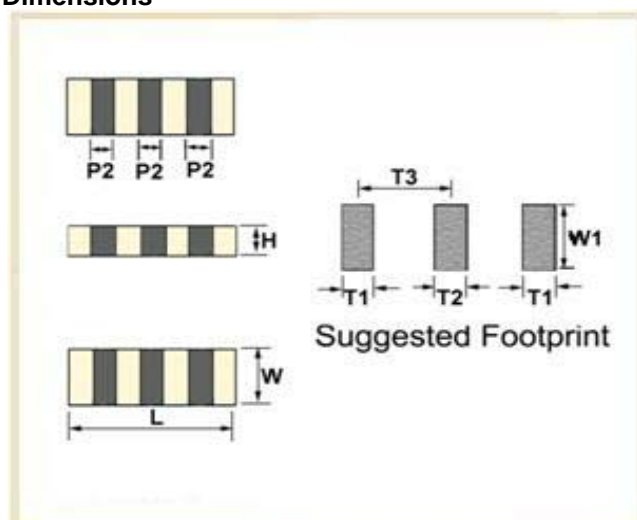
Compatible with Eu Directive
2002/95/EC - RoHS
Contains Pb in ceramic parts
exempted from article 4(1)
of the directive



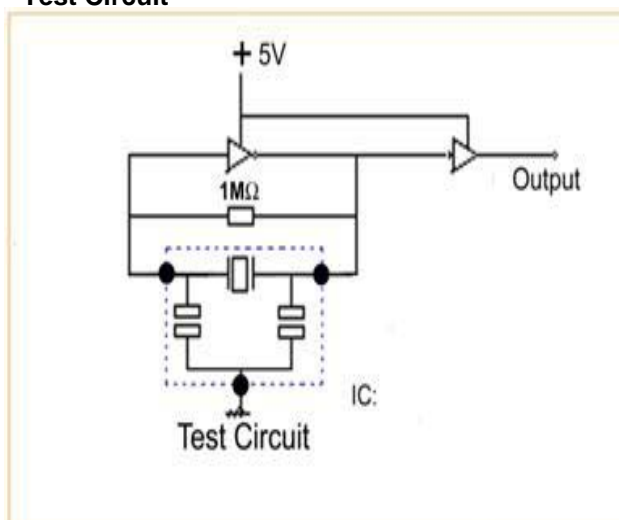
Specification

Type	Frequency Range (MHz)	Frequency Tolerance (25°C) (%)	Stability over Temp. Range (-25 ~ +85°C) (%)	Operating Temperature (°C)	Aging over 10 Years (%)	Notes
ZTTCP_MG	2.0 ~ 12.0	±0.5	±0.3	-25 ~ +85°C	±0.3	Fundamental mode

Dimensions



Test Circuit



Dimension Table (Unit: mm)

Part Type	Frequency	L	W	H	P2	T1	T2	T3	W1
ZTTCP_MG	2.0 ~ 12.0	±0.2	±0.2	Max	±0.2	±0.3	±0.3	±0.3	±0.3
		6.0	3.0	1.9	1.2	1.7	1.5	2.5	4.0

Test Circuit Parameters:

IC (MG)	1/6TC4069UBP x 2
C1=C2(MG)	30pF(2.0~8.0MHz)
C1=C2(MG)	15pF(8.01~12.00MHz)
VDD	= +5V

Important note when using Ceramic resonators with microcontrollers

Some resonator parameters vary considerably with frequency and physical construction/size. These differences are too great to be able to be practically shown in a data sheet.

However, these parameters can be critical when the resonators are used with microcontrollers. Even if two different resonators appear to have the same specification the typical values of these critical parameters can be considerably different. When enquiring about resonators for use with microcontrollers it is important to supply the make and part number of the IC to be used and/or the list of recommended resonators, if this is given.

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COMMODITY CODE
854160 00 00

PART NUMBERING & COMMODITY CODE

Standard (Popular) Specifications Highlighted in Yellow - Others available please check Note.3

ZTTCP	6.00	M	N	F	L	PF
ZTTCP_MG	Frequency	MHz	Freq.Tol. 0.5%	Stability:±0.3%,-25~+85°C	Loose	RoHS v
①	②	③	④	⑤	⑥	⑦

①	
ACT Series	Code
ZTTCP_MG	ZTTCP

② Frequency
Use full frequency including decimal point.

③	
Unit	Code
MHz	M

④	
Freq. Tolerance	Code
2kHz	R
1kHz	P
0.70%	T
0.50%	N
0.40%	S
0.30%	O
0.25%	Q
Note 3	

⑤	
Stability	Code
±0.5%, -20~+85°C	A
±0.4%, -20~+85°C	B
±0.3%, -20~+85°C	C
±0.2%, -20~+85°C	D
±0.1%, -20~+85°C	E
±0.2%, -25~+85°C	H
±0.3%, -25~+85°C	F
±0.4%, -25~+85°C	M
±0.3%, -40~+70°C	G
±0.5%, -40~+85°C	I
±0.4%, -40~+85°C	J
±0.3%, -40~+85°C	K
±0.25%, -40~+85°C	L
±0.5%, -40~+105°C	P
±0.4%, -40~+105°C	Q
±0.3%, -40~+105°C	R
±0.2%, -40~+105°C	S
±0.5%, -40~+125°C	V
±0.4%, -40~+125°C	W
±0.3%, -40~+125°C	X
±0.2%, -40~+125°C	Y
Note 3	

⑥	
Tape & Reel	Code
4000	F
1000	C
Loose	L

⑦	
RoHS	Code
Approved v	PF

Example Full Part Number
For 6.00MHz Order ZTTCP6.00MNFL-PF

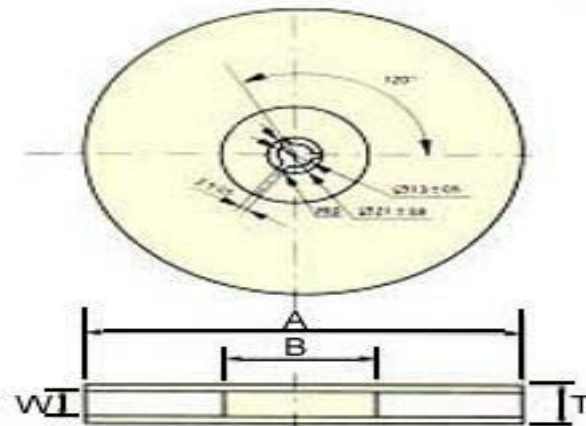
Notes:

- 1) Tighter Stabilities, tolerances, Output Loads and Operating Temperature Ranges may be available. As each of these specification parameters may impact on each other, it is not always possible to combine all options in one device. Therefore, if a specification not catered for above is required, please contact us directly for assistance.
- 2) ACT are always happy to consider truly custom specification parts which may require non-standard specification parameters, specific testing, customer requested AQL requirements, non standard packaging or taping and reeling and custom marking. (MOQ DEPENDENT) Such devices would normally be allocated a custom specification

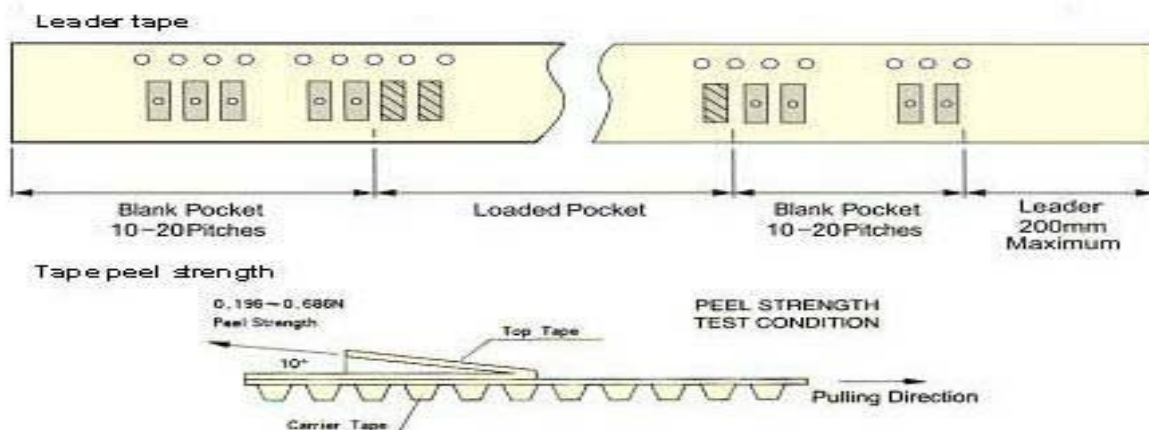
(An 'ACT ZTTCP_MG' type device may have part number such as ZTTCP6.00-C1501-PF).

- 3) Enquire if a stability and / or tolerance other than the standard(s) highlighted in yellow is required.
- 4) MOQ 500 pieces, apart from development samples and thereafter quantities in multiples of 500 pieces.

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Tape and Reel Dimensions:


ØA	ØB	W	T	Pieces per reel	Carrier tape width
330±3	80 min	16.4 min	22.4 max	4000 typ	16


Soldering Information:
