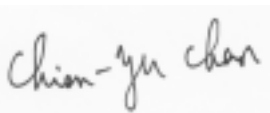




亞陶通訊科技股份有限公司  
eCERA Comtek Corporation

*SPECIFICATION FOR APPROVAL*

CUSTOMER NAME Cypress Semiconductor  
NOMINAL FREQUENCY 13.000000 MHz  
HOLDER TYPE TYPE GF DIP 49SS SMD X'TAL  
eCERA PART NUMBER GF1300001  
CUSTOMER P/N 800-11791  
ISSUE DATE Nov.5,2003

APPROVED	PREPARED	QA
		
APPROVED BY CUSTOMER :		
<p style="text-align: center;">Please return one copy with approval to Ecera</p>		

No. 2, Tsu-Chiang Wu Rd., Chung Li Industrial Park, Chung Li City Taoyuan Hsien, Taiwan, R. O. C.  
桃園縣中壢市中壢工業區自強五路二號 TEL : 886-3-4518888 FAX : 886-3-4613865

Ver A  
E0-R-4-014



# TYPE GF DIP 49SS SMD X'TAL

## ELECTRICAL CHARACTERISTICS

PN : GF1300001

1. Nominal Frequency : 13.000000 MHz
2. Mode of Oscillation : FUNDAMENTAL
3. Load Capacitance : 10 pF
4. Frequency Tolerance :  $\pm 30$  ppm at 25  $\pm 3$
5. Frequency Stability :  $\pm 30$  ppm With Working Temperature  
(REFERENCE TO 25 FREQUENCY)
6. Working Temperature Range : -10 70
7. Storage Temperature Range : - 40 85
8. Series Resonant Resistance : 100 ohm
9. Drive Level : 100 uW
10. Shunt Capacitance : 7 pF
11. Aging : 3 ppm / year
12. Insulation Resistance : More Than 500M ohm at DC 100V

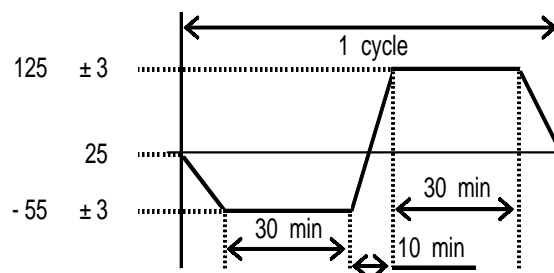
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# TYPE GF DIP 49SS SMD X'TAL

## RELIABILITY SPECIFICATIONS

NO. TEST ITEM	TEST METHODS
1. DROP TEST	random drops.
2. MECHANICAL SHOCK	mutually prependicular axes each 3 times.
3. VIBRATION	Frequency range 10 ~ 2000 Hz Amplitude 1.5 mm Sweep Time 20 minute Test Time 2 hours
4. SOLDERABILITY	MIL - STD - 202E Method 208C Temperature 245 ± 5 Material H63A ( Silver 2~3 % ) Immersion depth 3.5 mm minimum Immersion time 1 ± 0.5 inch/seconds Flux Rosin resin methyl alcohol solvent ( 1 : 4 )
5. RESISTANCE TO SOLDERING HEAT	MIL-STD-202, Method 210, Condition I or J 10 sec immersion into 260 ± 5 solder pot , above 180 is 90 ~ 120 sec.
6. LOW TEMP. STORAGE	Leave at - 40 ± 2 for 1000 ± 12 hours
7. HIGH TEMP. STORAGE	Leave at 85 ± 2 for 1000 ± 12 hours
8. THERMAL SHOCK	

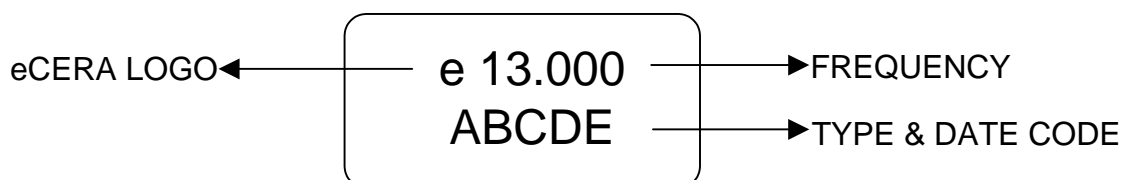


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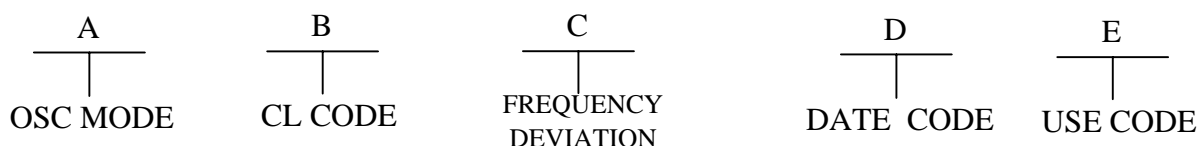
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# TYPE GF DIP 49SS SMD X'TAL

## MARKING



## TYPE AND DATE CODE



### OSC MODE

F	AT - Fundamental
T	AT - Third Overtone
B	BT - CUT

### CL CODE

CODE	CL	CODE	CL
S	Series	H	27
A	16	I	10
B	20	J	14
C	3	K	15
D	18	L	25
E	32	M	9
F	12	N	13
G	22		

### FREQUENCY

1	± 20ppm
2	± 25ppm
3	± 30ppm
5	± 15ppm
6	± 50ppm
9	± 10ppm
0	± 100ppm

### DATE CODE (Marking Shows the date code as:)

YEAR MONTH	2002	2003	2004	2005
JAN	N	a	n	A
FEB	P	b	p	B
MAR	Q	c	q	C
APR	R	d	r	D
MAY	S	e	s	E
JUN	T	f	t	F
JUL	U	g	u	G
AUG	V	h	v	H
SEP	W	j	w	J
OCT	X	k	x	K
NOV	Y	i	y	L
DEC	Z	m	z	M

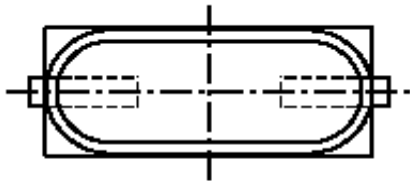
This date will be cycling every four year

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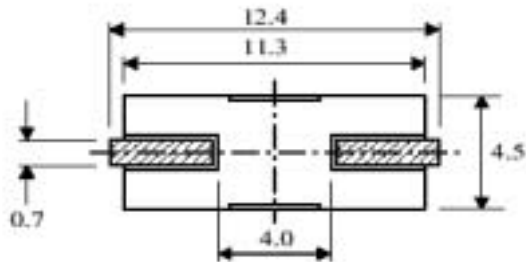
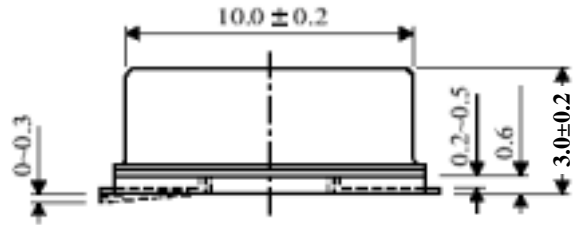
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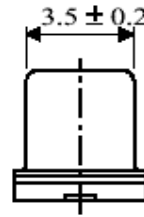
## DEMONSTRATIONS UNIT : mm



( Top View )

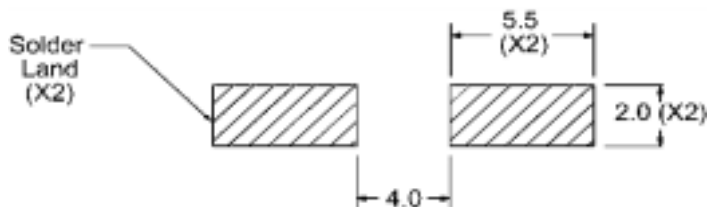


( Bottom View )

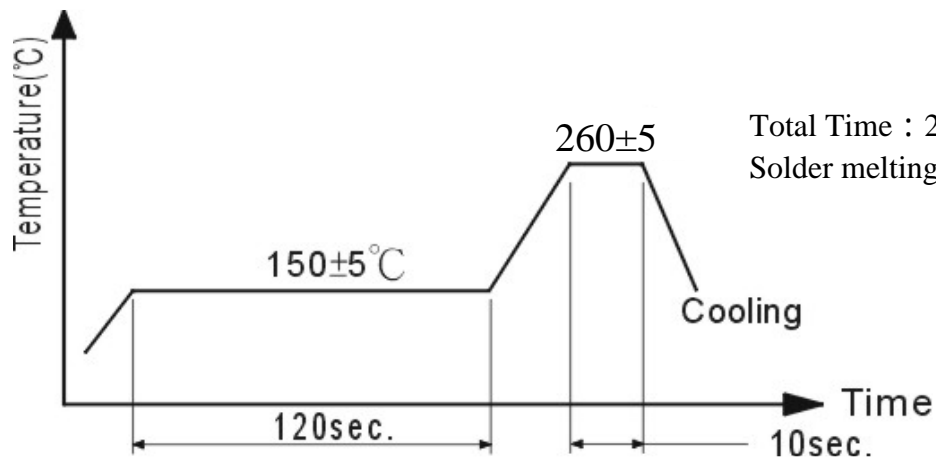


TOLERANCE : ±0.2mm

## SUGGESTED DIMENSIONS UNIT : mm



## SUGGESTED IR REFLEW PROFILE



Total Time : 200 Sec.Max  
Solder melting point : 185

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