CLOCK OSCILLATOR

COM11805-12.000-EXT-T-TR

■ ELECTRICAL SPECIFICATION

PARAMETER	SYMBOL	CONDITIONS	VALUE	UNIT
Nominal Frequency	fo	Ta=25°C	12.000	MHz
Supply voltage range	V_{CC}	---	1.8	VDC
Supply current, max	I_S	Ta=25°C	3.5	mA
Operating temperature	Ta	---	-40 ~ +85	°C
Storage temperature	$T_{(stg)}$	Absolute max	-55 ~ +125	°C
Frequency Tolerance	Δf/fo	Inclusive of 25°C Tolerance and Changes due to Operating Temperature, Supply Voltage, Load, Aging, Shock and Vibration	±50	ppm
Output Voltage	V_{OL}	Logic "0" Level	0.1 x Vcc	VDC
	V_{OH}	Logic "1" Level	0.9 x Vcc	VDC
Output Load	---	CMOS Output	15	pF
Enable / Disable Function	E/D	Pin 1: N.C. (Open) or High	Pin 3 – Oscillation (Enabled)	
		Pin 1: Low	Pin 3 – High Impedance (Disabled)	
Symmetry (Duty Cycle)	DC	@50% Vdd	45 to 55	%
Rise Time and Fall Time	tr / tf	@10% to 90% Vdd	6.5	ns
Stand-by Current	$I_{(std)}$	---	10	µA
Start up time, Max	t_s	$V_{OUT} \geq 90\% V_{P-P}$	10	ms

Photo is not actual part

■ MECHANICAL SPECIFICATION

3.2 ±0.10
.126 ±.004

MARKING AREA

2.5 ±0.10
.098 ±.004

1.2 Max
0.047 Max

PIN CONNECTION

1 - ENABLE / DISABLE
2 - GROUND
3 - OUTPUT
4 - SUPPLY VOLTAGE

1.00 1.20
.04   .05

0.75
.03

1   2

1.0
.04

4   3

1.2   1.0
.047 .04

0.95
.037

0.8
.031

SOLDER PATTERN

NOTE: A capacitor of 0.01 µF between Vcc and Ground is recommended

■ CARRIER TAPE DIMENSIONS

ø 1.5
ø .059

4.0 ± 0.1
.157 ± .004

0.25 ± 0.05
.010 ± .002

1.75 ± 0.1
.069 ± .004

ø 1.15
ø .045

2.0 ± 0.05
.079 ± .002

3.5 ± 0.1
.138 ± .008

3.5 ± 0.05
.138 ± .002

8.0 ± 0.2
.315 ± .008

4.0 ± 0.1
.157 ± .004

2.8 ± 0.1
.110 ± .004

1.0 ± 0.1
.039 ± .004

NOTE: REFER TO EIA-481 FOR DIMENSIONS

■ PACKAGING

178 mm REEL DIAMETER
8 mm TAPE WIDTH, 4 mm PITCH
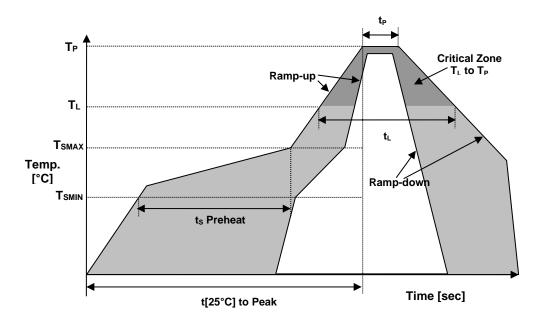QUANTITY: 3000 PIECES PER REEL

IN ACCORDANCE WITH EIA-481

■ **REFLOW PROFILE**

Reflow profile		
Temperature Min Preheat	T_{SMIN}	150°C
Temperature Max Preheat	T_{SMAX}	200°C
Time (T_{SMIN} to T_{SMAX})	t_S	60-180 sec.
Temperature	T_L	217°C
Peak Temperature	T_P	260°C
Ramp-up rate	R_{UP}	3°C/sec max.
Ramp-down rate	R_{DOWN}	6°C/sec max.
Time within 5°C of Peak Temperature	t_P	10 sec. max.
Time t[25°C] to Peak Temperature	t[25°C] to Peak	480 sec.
Time	t_L	60-150 sec.

■ **ENVIRONMENTAL**

PARAMETER	VALUE
MOISTURE SENSITIVITY LEVEL	1
RoHS2	6/6 COMPLIANT & LEAD FREE
REACH-SVHC	COMPLIANT
HALOGEN-FREE	COMPLIANT
TERMINATION FINISH	Au

■ **MARKING**

Rx12.00
•18BEyw

x – Internal Production ID code
y – Year code
w – Week code

YEAR CODE	
Year	**Code**
2011	1
2012	2
2013	3
2014	4
2015	5
2016	6
2017	7
2018	8
2019	9

ALPHA WEEK CODE TABLE					
Week	**Code**	**Week**	**Code**	**Week**	**Code**
1	a	19	s	37	K
2	b	20	t	38	L
3	c	21	u	39	M
4	d	22	v	40	N
5	e	23	w	41	O
6	f	24	x	42	P
7	g	25	y	43	Q
8	h	26	z	44	R
9	i	27	A	45	S
10	j	28	B	46	T
11	k	29	C	47	U
12	l	30	D	48	V
13	m	31	E	49	W
14	n	32	F	50	X
15	o	33	G	51	Y
16	p	34	H	52	Z
17	q	35	I		
18	r	36	J		

■ **APPROVAL**

RALTRON	
DRAWN BY:	KJackson, November 20, 2015
APPROVED BY:	KJackson, November 20, 2015
REVISION:	A, Initial Release
	B, Redrawn & Corrected dimensions of pads; added Carrier Tape Dimensions and Packaging, F. Parra, 15 December 2015