

# 3.3V HCMOS/ TTL COMPATIBLE SMD CRYSTAL CLOCK OSCILLATOR

**ASFL1**



**RoHS**  
Compliant



5.0 x 3.2 x 1.3mm

## FEATURES:

- Tri state function
- Suitable for high density SMT
- Available tight stability option +/-20ppm
- Seam sealed package assures high reliability performance
- Suitable for RoHS compliant reflow process

## APPLICATIONS:

- CCD clock for VTR camera
- Equipment connected to PC or PC cards
- Thin equipment
- Wireless communication
- PDA, Laptop computer

## STANDARD SPECIFICATIONS:

Parameters		Minimum	Typical	Maximum	Units	Notes
Frequency Range		0.321	-----	133.33	MHz	
Operating Temperature		-10	-----	+70	°C	See options
Storage Temperature		-55	-----	+125	°C	
Overall Frequency Stability		-100	-----	+100	ppm	See options
Supply Voltage (Vdd)		2.97	3.3	3.63	V	
Input Current	0.321MHz ~ 29.9MHz	-----	8	15	mA	
	30MHz ~ 79.9MHz	-----	20	45		
	80MHz ~ 133.33MHz	-----	28	85		
Symmetry (@ 1/2Vdd)		40	50	60	%	See options
Rise and Fall Time (Tr/Tf)	0.321MHz ~ 29.9MHz	-----	5	10	ns	
	30MHz ~ 79.9MHz	-----	5	7		
	80MHz ~ 133.33MHz	-----	3	7		
Output Load		-----	-----	15	pF	
		-----	-----	5	TTL	
Output Voltage	VOH	0.9*Vdd	-----	-----	V	
	VOL	-----	-----	0.1*Vdd	V	
Tri-state Function	VIH	0.7*Vdd	-----	-----	V	"1" or Open: Oscillation
	VIL	-----	-----	0.3*Vdd	V	"0": Output disable (Hi Z)
Disable Current				10	µA	
Start-up Time	0.321MHz ~ 29.9MHz	-----	1	10	ms	
	30MHz ~ 79.9MHz	-----	3	10		
	80MHz ~ 133.33MHz	-----	3	10		
Phase Jitter RMS (12kHz to 20MHz)		-----	-----	1	ps	Reference only. Please contact Abracon for specific frequencies
Aging		-5.0	-----	+5.0	ppm	@+25°C First year

## OPTIONS AND PART IDENTIFICATION:

(Left blank if standard)

ASFL1-   MHz -       -  

**Frequency in MHz**  
e.g. 24.576MHz  
14.31818MHz  
26.000MHz

**Operating Temp.**  
I: 0°C ~ +50°C  
D: -10°C ~ +60°C  
E: -20°C ~ +70°C  
F: -30°C ~ +70°C  
N: -30°C ~ +85°C  
L: -40°C ~ +85°C

**Freq. Stability**  
J: ± 20 ppm(\*)  
R: ± 25 ppm  
K: ± 30 ppm  
H: ± 35 ppm  
B: ± 40ppm  
C: ± 50 ppm

**Symmetry**  
Blank: 40/60% @1/2Vdd  
S: 45/55% @1/2Vdd

(\*) Temp option I, D, E and -10°C ~ +70°C only.

**Packaging**  
Blank: Bulk  
T: 1000pcs/reel  
T2: 250pcs/reel

ABRACON IS  
ISO9001:2008  
CERTIFIED



**ABRACON**  
CORPORATION

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Dimensions: inches (mm)