

1.35Vdc CMOS OUTPUT 3.2 x 2.5 SMD CRYSTAL CLOCK OSCILLATOR



3.2 x 2.5 x 1.2 mm

ASE5 SERIES

Moisture Sensitivity Level (MSL) -1



RoHS/RoHS II Compliant

FEATURES:

- Compact and low profile
- Low current consumption
- Tri-state function
- 1.35Vdc supply voltage ideal for low power ASIC's
- Ideal for high density SMT
- IR reflow capable
- Tight stability option

APPLICATIONS:

- CCD clock for VTR camera
- Computer peripherals
- Digital camera, MP3 player
- Mobile communications
- PDA

STANDARD SPECIFICATIONS:

Parameters	Minimum	Typical	Maximum	Units	Notes
Frequency Range	1.0		50	MHz	
Operating Temperature	-10		+70	°C	STD (See options)
Storage Temperature	-55		+125	°C	
Overall Frequency Stability	-100		+100	ppm	See options
Supply Voltage (Vdd)	+1.2825	1.35	+1.4175	V	
Supply Current (Idd)		1.2	1.5	mA	1.0 ~ 20 MHz
		1.8	2.5		20.1 ~ 40.0 MHz
		2.3	3.0		40.01 ~ 50.0 MHz
Symmetry @ 1/2Vdd	45	50	55	%	
Rise and Fall Time (Tr/Tf)		1.3	3.0	ns	1.0 ~ 20 MHz
		1.3	3.0		20.1 ~ 40.0 MHz
		1.3	3.0		40.01 ~ 50.0 MHz
Output Load			15	pF	CMOS
Output Voltage (VOH)	0.9* Vdd			V	
Output Voltage (VOL)			0.1* Vdd	V	
Start-up Time		1.0	2.0	ms	0.5 ~ 20 MHz
		1.0	2.0		20.1 ~ 40.0 MHz
		1.0	2.0		40.01 ~ 50.0 MHz
Tri-state function (Stand-by)	"1" (VIH≥0.7*Vdd) or Open: Oscillation; "0" (VIL<0.3*Vdd) : No oscillation/Hi Z				
RMS Jitter:		3.3	5	ps	0.5 ~ 20 MHz
		3.3	5		20.1 ~ 40.0 MHz
		3.3	5		40.01 ~ 50.0 MHz
Aging at 25°C (first year)	-3		+3	ppm	
Stand-by Current:			10	µA	

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Pb | RoHS/RoHS II Compliant

OPTIONS & PART IDENTIFICATION: (Left blank if standard)

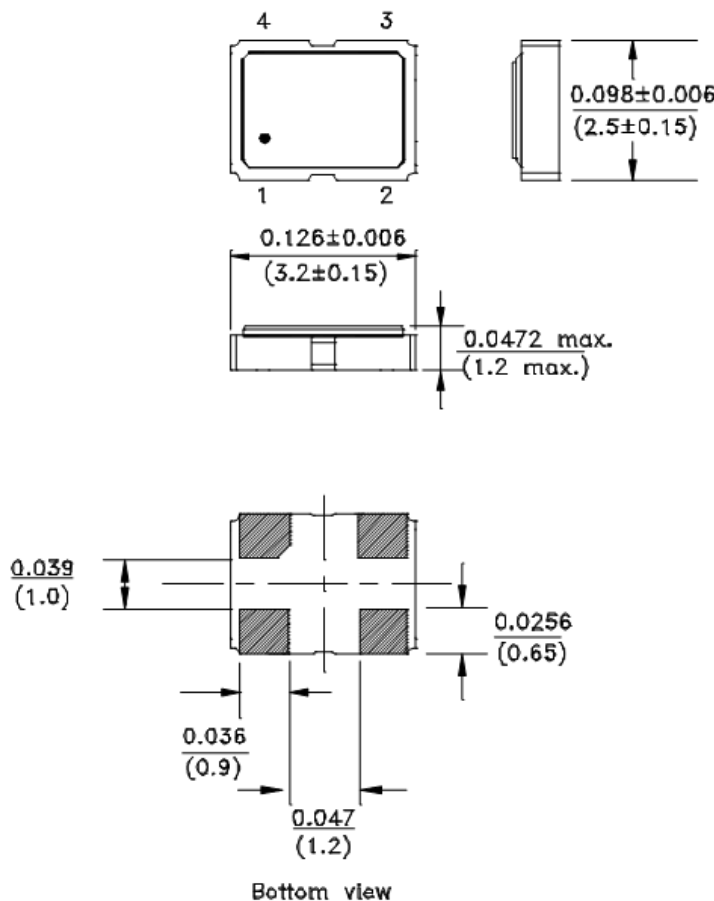
ASE5- MHz - - -

Frequency in MHz	Operating Temp.	Overall Freq. Stability	Packaging
e.g. 24.576MHz 14.31818MHz 26.000MHz	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	J(*): ±20ppm R: ±25ppm K: ±30ppm H: ±35ppm B: ±40ppm C: ±50ppm	T: 1000pcs/Reel

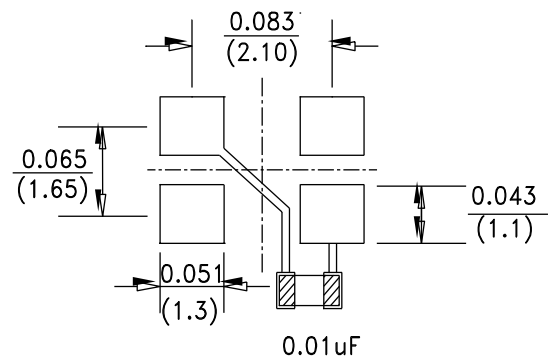
Contact ABRACON for wider temperature range.

*: Temp options I, D, E, and -10°C to +70°C only

OUTLINE DIMENSION:



Recommended land pattern



Pin	Function
1	Tri-State (STBY)
2	GND/Case
3	Output
4	Vdd

Note1: Recommend using an approximately 0.01uF bypass capacitor between PIN 2 and 4.

Note2: The outline package configuration varies with frequency range. Electrical properties, pin configuration, and land pattern are the same.