Summary of Crableg Resonator Data

Applied AC Voltage	Parameter	Die 1					Die 5				
		Reson 1	Reson 2	Reson 3	Reson 4	Reson 5	Reson 1	Reson 2	Reson 3	Reson 4	Reson 5
2.5 V	Resonant Frequency (kHz)	55.65	N/A	55.95	55.90	55.85	55.90	56.15	56.20	56.50	56.65
	Max. Amplitude (micron)	1.438		1.532	1.456	1.469	1.181	1.414	1.488	1.446	1.342
5.0 V	Resonant Frequency (kHz)	55.80		56.05	56.00	55.90	56.00	56.30	56.40	56.60	56.65
	Max. Amplitude (micron)	3.023		3.119	2.985	3.022	2.602	2.904	2.908	2.521	2.193
5.0 V (backward)	Resonant Frequency (kHz)	N/A					56.00	56.25	56.35	56.65	56.65
	Max. Amplitude (micron)						2.708	2.855	3.085	3.115	2.095

Summary	Die 1		Die 5		
	2.5 V	5.0 V	2.5 V	5.0 V	5.0 V (b)
Avg. Res. Freq. (kHz)	55.84	55.94	56.28	56.39	56.38
Avg. Max. Amp. (micron)	1.474	3.037	1.374	2.626	2.772
Freq. Range (kHz)	0.30	0.25	0.75	0.65	0.65
Percentage Deviation	0.54	0.45	1.33	1.15	1.15

Observations

- The resonant frequency on die 1 is a maximum at the middle of the die (resonator 3) and lower at the corners. The trend for die 5 shows an increasing resonant frequency across the the length of the die (from resonator 1 to resonator 5).

- The maximum on chip deviation for the resonant frequency is approximately 1.3%