

4/29/2016	Testing 3-phase Motor-as-Alternator - Samsung DC31-00049A						
Test Conditions:							
3-phase silicon bridge rectifier (35A/1000V), Diode Vfwd approx. 0.8V ea.; 2200uF @ 450V Low-Z capacitor							
Driven with 2HP treadmill motor, vernier POT variable speed controller.							
<b>R-Load</b>	<b>RPM</b>	<b>Freq. (Hz)@ ea. stator finger</b>	<b>V_DC across Load (meas.)</b>	<b>DC-Amps at load (calc.)</b>	<b>Watts @ Load</b>	<b>1-phase AC-V w/load</b>	
30.9	203	81	57.5	1.9	107.0		
	252	101	70.0	2.3	158.6		
	300	120	82.0	2.7	217.6		
	350	140	94.0	3.0	286.0		
(motor controller was limiting operation above 350 RPM at this heavy load)							
41.3	200	80	60.0	1.5	87.2		
	250	100	73.3	1.8	130.1		
	303	121	88.0	2.1	187.5		
	352	141	100.6	2.4	245.0		
	400	160	112.0	2.7	303.7		
	453	181	125.0	3.0	378.3		
							theor. DC-V (avg.)
50.8	200	80	61.0	1.2	73.2	47.0	61.6
	250	100	75.0	1.5	110.7	57.4	75.6
	300	120	89.5	1.8	157.7	68.0	89.9
	353	141	104.0	2.0	212.9	78.5	104.1
	400	160	116.6	2.3	267.6	88.0	116.9
	453	181	130.0	2.6	332.7		
<b>Measured 1-phase output, NO Load / open circuit</b>							
	<b>RPM</b>	<b>Freq.</b>	<b>AC-V</b>				
	200	80	52.2				
	250	100	65.0				
	300	120	78.0				
	350	140	91.0				
	400	160	104.8				