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THE ACTIVE ENERGY TRANSMISSION EFFICIENCY THROUGH LINEAR, NON-AUTONOMOUS AND PASSIVE TWO-PORTS SUPPLYING NON-LINEAR INERTIAL AND PASSIVE RECEIVERS, IN HARMONIC STEADY-STATE (I)

BY

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Abstract. The active power's transmission with maximum efficiency, in harmonic steady-state, through a linear, non-autonomous and passive two-port is studied, when the receiver is non-linear inertial and passive. If $\underline{Z}_2(I_m) = R_2(I_m) + j\, X_2(I_m)$ is the equivalent complex impedance of this receiver, when the active power's efficiency is maximum, the function $X_2(R_2)$ represents the solution of a non-linear differential equation of first order. This function is obtained using an analytical proceeding.

Key words: Linear, non-autonomous, passive two-port; non-linear inertial and passive receiver; maximum efficiency of the active power's transmission.