2.3.5 Nodd w real and asymmetric $w = \begin{bmatrix} w_1 \\ 0 \\ -Jw_1 \end{bmatrix}$ w_1 real, first $\frac{N-1}{2}$ elements of w

$v(e)$ conjugate symmetric $= \begin{bmatrix} V_1(e) \\ V_c(e) \\ JV_1^*(e) \end{bmatrix}$

$$B_e(e) = w^{\#} v(e) = \begin{bmatrix} w_1^T & 0 & -w_1^T J^T \end{bmatrix} \begin{bmatrix} V_1(e) \\ V_c(e) \\ JV_1^*(e) \end{bmatrix} = w_1^T V_1(e) - w_1^T J^T J V_1^*(e)$$

$$= w_1^T \{ V_1(e) - V_1^*(e) \} = w_1^T 2j \, \mathrm{Im}\{V_1(e)\}$$

$$B_e(e) = j \left[2 w_1^T \mathrm{Im}\{V_1(e)\} \right] \Rightarrow \text{purely imaginary}$$