

X direction EMF

\circ
 $\varepsilon_{x,i,j,k-1}^{ref}$

\circ
 $\varepsilon_{x,i,j,k}^{ref}$

$\leftarrow \bullet \rightarrow F_{i,j,k-1/2}$

$\square \left(\frac{\partial \varepsilon}{\partial y} \right)_{i,j-1/4,k-1/2}$

$\varepsilon_{x,i,j-1/2,k-1/2}$

$\bullet \uparrow F_{i,j-1/2,k-1}$

$\square \left(\frac{\partial \varepsilon}{\partial z} \right)_{i,j-1/2,k-3/4}$

$\square \left(\frac{\partial \varepsilon}{\partial z} \right)_{i,j-1/2,k-1/4}$

$\bullet \uparrow F_{i,j-1/2,k}$

$\square \left(\frac{\partial \varepsilon}{\partial y} \right)_{i,j-3/4,k-1/2}$

$\varepsilon_{x,i,j-1,k-1}^{ref}$
 \circ

$\varepsilon_{x,i,j-1,k}^{ref}$
 \circ

$\leftarrow \bullet \rightarrow F_{i,j-1,k-1/2}$

