$$k_{2}$$

$$k_{3}$$

$$k_{4}$$

$$k_{1}$$

$$k_{2}$$

$$\rho(k_{1})\rho(k_{2})\delta^{(D)}(\vec{k}_{1}-\vec{k}_{2})$$

$$-i\lambda(2\pi)^{d}\delta^{(d)}(k_{1}+k_{2}-k_{3}-k_{4})$$

$$-\frac{i\lambda}{2}(2\pi)^{d}\delta^{(d)}(k_{2}-k_{4})\int\frac{d^{D}p}{\rho(p)}$$

$$-\frac{i\lambda}{8}\int d^{d}x\int\frac{d^{D}p_{1}}{\rho(p_{1})}\frac{d^{D}p_{1}}{\rho(p_{1})}$$

$$k_{3}$$

$$k_{4}$$

$$k_{3}$$

$$k_{4}$$

$$k_{4}$$

$$-\frac{i\lambda}{8}\int d^{d}x\int\frac{d^{D}p_{1}}{\rho(p_{1})}\frac{d^{D}p_{1}}{\rho(p_{1})}$$

$$k_{3}$$

$$k_{4}$$

$$k_{3}$$

$$k_{4}$$

$$k_{4}$$

$$k_{5}$$

$$p_{1}$$

$$k_{1}$$

$$k_{2}$$

$$\rho(k_{1})\rho(k_{3})\delta^{(D)}(\vec{k}_{1}-\vec{k}_{3})$$

$$\rho(k_{1})\rho(k_{3})\rho(k_{3})\rho(k_{4})\delta^{(D)}(\vec{k}_{1}-\vec{k}_{3})\delta^{(D)}(\vec{k}_{2}-\vec{k}_{4})$$