

Fields in the vertex	Variational derivative of Lagrangian by fields
$A_\mu \quad A_\nu$	$-p_1^\rho p_1^\rho g^{\mu\nu}$
$\bar{b}_{ap} \quad b_{bq}$	$-\delta_{pq}(p_1^\mu \gamma_{ab}^\mu + M_b \cdot \delta_{ab})$
$\bar{c}_{ap} \quad c_{bq}$	$-\delta_{pq}(p_1^\mu \gamma_{ab}^\mu + M_c \cdot \delta_{ab})$
$\bar{d}_{ap} \quad d_{bq}$	$-\delta_{pq}(p_1^\mu \gamma_{ab}^\mu + M_d \cdot \delta_{ab})$
$\bar{e}_a \quad e_b$	$-p_1^\mu \gamma_{ac}^\mu \delta_{cb}$
$\bar{\mu}_a \quad \mu_b$	$-(p_1^\mu \gamma_{ab}^\mu + M_\mu \cdot \delta_{ab})$
$\bar{\tau}_a \quad \tau_b$	$-(p_1^\mu \gamma_{ab}^\mu + M_\tau \cdot \delta_{ab})$
$G_{\mu p} \quad G_{\nu q}$	$-p_1^\rho p_1^\rho g^{\mu\nu} \delta_{pq}$
$H \quad H$	$-(M_H^2 - p_1^\mu p_1^\mu)$
$\bar{\nu}^e{}_a \quad \nu^e{}_b$	$-p_1^\mu \gamma_{ac}^\mu \frac{(1-\gamma^5)_{cb}}{2}$
$\bar{\nu}^\mu{}_a \quad \nu^\mu{}_b$	$-p_1^\mu \gamma_{ac}^\mu \frac{(1-\gamma^5)_{cb}}{2}$
$\bar{\nu}^\tau{}_a \quad \nu^\tau{}_b$	$-p_1^\mu \gamma_{ac}^\mu \frac{(1-\gamma^5)_{cb}}{2}$
$\bar{s}_{ap} \quad s_{bq}$	$-\delta_{pq}(p_1^\mu \gamma_{ab}^\mu + M_s \cdot \delta_{ab})$
$\bar{t}_{ap} \quad t_{bq}$	$-\delta_{pq}(p_1^\mu \gamma_{ab}^\mu + M_t \cdot \delta_{ab})$
$\bar{u}_{ap} \quad u_{bq}$	$-\delta_{pq}(p_1^\mu \gamma_{ab}^\mu + M_u \cdot \delta_{ab})$
$W^+{}_\mu \quad W^-{}_\nu$	$-g^{\mu\nu}(p_1^\rho p_1^\rho - M_W^2)$
$W_F^+ \quad W_F^-$	$(p_1^\mu p_1^\mu - M_W^2)$
$Z_\mu \quad Z_\nu$	$-\frac{1}{c_w^2} g^{\mu\nu} (c_w^2 \cdot p_1^\rho p_1^\rho - M_W^2)$
$Z_F \quad Z_F$	$\frac{1}{c_w^2} (c_w^2 \cdot p_1^\mu p_1^\mu - M_W^2)$
$\sim V^+{}_\mu \quad \sim V^-{}_\nu$	$-\frac{1}{e^2} (2M_W^2 \cdot s_w^2 \cdot \lambda_2 \cdot g^{\mu\nu} - e^2 \cdot M_V^2 \cdot g^{\mu\nu} + e^2 \cdot p_1^\rho p_1^\rho g^{\mu\nu} - e^2 \cdot p_1^\mu p_1^\nu)$
$\sim V_{1\mu} \quad \sim V_{1\nu}$	$-\frac{1}{e^2} (2M_W^2 \cdot s_w^2 \cdot \lambda_2 \cdot g^{\mu\nu} + 2M_W^2 \cdot s_w^2 \cdot \lambda_3 \cdot g^{\mu\nu} + 2M_W^2 \cdot s_w^2 \cdot \lambda_4 \cdot g^{\mu\nu} - e^2 \cdot M_V^2 \cdot g^{\mu\nu} + e^2 \cdot p_1^\rho p_1^\rho g^{\mu\nu} - e^2 \cdot p_1^\mu p_1^\nu)$
$\sim V_{2\mu} \quad \sim V_{2\nu}$	$-\frac{1}{e^2} (2M_W^2 \cdot s_w^2 \cdot \lambda_2 \cdot g^{\mu\nu} + 2M_W^2 \cdot s_w^2 \cdot \lambda_3 \cdot g^{\mu\nu} - 2M_W^2 \cdot s_w^2 \cdot \lambda_4 \cdot g^{\mu\nu} - e^2 \cdot M_V^2 \cdot g^{\mu\nu} + e^2 \cdot p_1^\rho p_1^\rho g^{\mu\nu} - e^2 \cdot p_1^\mu p_1^\nu)$
$A_\mu \quad W^+{}_\nu \quad W^-{}_\rho$	$-e(p_2^\rho g^{\mu\nu} - p_2^\mu g^{\nu\rho} - p_3^\nu g^{\mu\rho} + p_3^\mu g^{\nu\rho} + p_1^\nu g^{\mu\rho} - p_1^\rho g^{\mu\nu})$

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$A_\mu \quad W_\nu^+ \quad W_F^-$	$i \cdot e \cdot M_W \cdot g^{\mu\nu}$
$A_\mu \quad W_F^+ \quad W_\nu^-$	$-i \cdot e \cdot M_W \cdot g^{\mu\nu}$
$A_\mu \quad W_F^+ \quad W_F^-$	$e(p_3^\mu - p_2^\mu)$
$A_\mu \quad \sim V_\nu^+ \quad \sim V_\rho^-$	$-e(p_3^\mu g^{\nu\rho} - p_2^\mu g^{\nu\rho} - p_3^\nu g^{\mu\rho} + p_2^\rho g^{\mu\nu} - p_1^\rho g^{\mu\nu} + p_1^\nu g^{\mu\rho})$
$\bar{C}^A \quad C^{W+} \quad W_\mu^-$	$-e \cdot p_1^\mu$
$\bar{C}^A \quad C^{W-} \quad W_\mu^+$	$e \cdot p_1^\mu$
$\bar{b}_{ap} \quad b_{bq} \quad A_\mu$	$\frac{1}{3} e \delta_{pq} \gamma_{ac}^\mu \cdot \delta_{cb}$
$\bar{b}_{ap} \quad b_{bq} \quad G_{\mu r}$	$g_s \cdot \lambda_{pq}^r \gamma_{ab}^\mu$
$\bar{b}_{ap} \quad b_{bq} \quad H$	$-\frac{1}{2} \frac{e \cdot M_b}{M_W \cdot s_w} \delta_{pq} \cdot \delta_{ab}$
$\bar{b}_{ap} \quad b_{bq} \quad Z_\mu$	$\frac{1}{6} \frac{e}{c_w \cdot s_w} \delta_{pq} \gamma_{ac}^\mu (2c_w^2 \cdot \frac{(1-\gamma^5)_{cb}}{2} + \frac{(1-\gamma^5)_{cb}}{2} - 2s_w^2 \cdot \frac{(1+\gamma^5)_{cb}}{2})$
$\bar{b}_{ap} \quad b_{bq} \quad Z_F$	$-\frac{1}{2} \frac{i \cdot e \cdot M_b}{M_W \cdot s_w} \delta_{pq} \cdot \gamma_{ab}^5$
$\bar{b}_{ap} \quad t_{bq} \quad W_\mu^-$	$-\frac{1}{2} \frac{e \cdot \sqrt{2}}{s_w} \cdot \delta_{pq} \gamma_{ac}^\mu \frac{(1-\gamma^5)_{cb}}{2}$
$\bar{b}_{ap} \quad t_{bq} \quad W_F^-$	$-\frac{1}{2} \frac{i \cdot e \cdot \sqrt{2}}{M_W \cdot s_w} \delta_{pq} (M_b \cdot \frac{(1-\gamma^5)_{ab}}{2} - M_t \cdot \frac{(1+\gamma^5)_{ab}}{2})$
$\bar{c}_{ap} \quad c_{bq} \quad A_\mu$	$-\frac{2}{3} e \delta_{pq} \gamma_{ac}^\mu \cdot \delta_{cb}$
$\bar{c}_{ap} \quad c_{bq} \quad G_{\mu r}$	$g_s \cdot \lambda_{pq}^r \gamma_{ab}^\mu$
$\bar{c}_{ap} \quad c_{bq} \quad H$	$-\frac{1}{2} \frac{e \cdot M_c}{M_W \cdot s_w} \delta_{pq} \cdot \delta_{ab}$
$\bar{c}_{ap} \quad c_{bq} \quad Z_\mu$	$-\frac{1}{6} \frac{e}{c_w \cdot s_w} \delta_{pq} \gamma_{ac}^\mu (4c_w^2 \cdot \frac{(1-\gamma^5)_{cb}}{2} - \frac{(1-\gamma^5)_{cb}}{2} - 4s_w^2 \cdot \frac{(1+\gamma^5)_{cb}}{2})$
$\bar{c}_{ap} \quad c_{bq} \quad Z_F$	$\frac{1}{2} \frac{i \cdot e \cdot M_c}{M_W \cdot s_w} \delta_{pq} \cdot \gamma_{ab}^5$
$\bar{c}_{ap} \quad s_{bq} \quad W_\mu^+$	$-\frac{1}{2} \frac{e \cdot \sqrt{2}}{s_w} \cdot \delta_{pq} \gamma_{ac}^\mu \frac{(1-\gamma^5)_{cb}}{2}$
$\bar{c}_{ap} \quad s_{bq} \quad W_F^+$	$\frac{1}{2} \frac{i \cdot e \cdot \sqrt{2}}{M_W \cdot s_w} \delta_{pq} (M_s \cdot \frac{(1+\gamma^5)_{ab}}{2} - M_c \cdot \frac{(1-\gamma^5)_{ab}}{2})$
$\bar{d}_{ap} \quad d_{bq} \quad A_\mu$	$\frac{1}{3} e \delta_{pq} \gamma_{ac}^\mu \cdot \delta_{cb}$
$\bar{d}_{ap} \quad d_{bq} \quad G_{\mu r}$	$g_s \cdot \lambda_{pq}^r \gamma_{ab}^\mu$
$\bar{d}_{ap} \quad d_{bq} \quad H$	$-\frac{1}{2} \frac{e \cdot M_d}{M_W \cdot s_w} \delta_{pq} \cdot \delta_{ab}$
$\bar{d}_{ap} \quad d_{bq} \quad Z_\mu$	$\frac{1}{6} \frac{e}{c_w \cdot s_w} \delta_{pq} \gamma_{ac}^\mu (2c_w^2 \cdot \frac{(1-\gamma^5)_{cb}}{2} + \frac{(1-\gamma^5)_{cb}}{2} - 2s_w^2 \cdot \frac{(1+\gamma^5)_{cb}}{2})$
$\bar{d}_{ap} \quad d_{bq} \quad Z_F$	$-\frac{1}{2} \frac{i \cdot e \cdot M_d}{M_W \cdot s_w} \delta_{pq} \cdot \gamma_{ab}^5$

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$\bar{d}_{ap} \quad u_{bq} \quad W^-_{\mu}$	$-\frac{1}{2} \frac{e \cdot \sqrt{2}}{s_w} \cdot \delta_{pq} \gamma_{ac}^{\mu} \frac{(1-\gamma^5)_{cb}}{2}$
$\bar{d}_{ap} \quad u_{bq} \quad W_F^-$	$-\frac{1}{2} \frac{i \cdot e \cdot \sqrt{2}}{M_W \cdot s_w} \delta_{pq} (M d \cdot \frac{(1-\gamma^5)_{ab}}{2} - M u \cdot \frac{(1+\gamma^5)_{ab}}{2})$
$\bar{e}_a \quad e_b \quad A_{\mu}$	$e \gamma_{ac}^{\mu} \cdot \delta_{cb}$
$\bar{e}_a \quad e_b \quad Z_{\mu}$	$-\frac{1}{2} \frac{e}{c_w \cdot s_w} \gamma_{ac}^{\mu} ((1 - 2c_w^2) \cdot \frac{(1-\gamma^5)_{cb}}{2} + 2s_w^2 \cdot \frac{(1+\gamma^5)_{cb}}{2})$
$\bar{e}_a \quad \nu^e_b \quad W^-_{\mu}$	$-\frac{1}{2} \frac{e \cdot \sqrt{2}}{s_w} \cdot \gamma_{ac}^{\mu} \frac{(1-\gamma^5)_{cb}}{2}$
$\bar{\mu}_a \quad \mu_b \quad A_{\mu}$	$e \gamma_{ac}^{\mu} \cdot \delta_{cb}$
$\bar{\mu}_a \quad \mu_b \quad H$	$-\frac{1}{2} \frac{e \cdot M_{\mu}}{M_W \cdot s_w} \cdot \delta_{ab}$
$\bar{\mu}_a \quad \mu_b \quad Z_{\mu}$	$-\frac{1}{2} \frac{e}{c_w \cdot s_w} \gamma_{ac}^{\mu} ((1 - 2c_w^2) \cdot \frac{(1-\gamma^5)_{cb}}{2} + 2s_w^2 \cdot \frac{(1+\gamma^5)_{cb}}{2})$
$\bar{\mu}_a \quad \mu_b \quad Z_F$	$-\frac{1}{2} \frac{i \cdot e \cdot M_{\mu}}{M_W \cdot s_w} \cdot \gamma_{ab}^5$
$\bar{\mu}_a \quad \nu^{\mu}_b \quad W^-_{\mu}$	$-\frac{1}{2} \frac{e \cdot \sqrt{2}}{s_w} \cdot \gamma_{ac}^{\mu} \frac{(1-\gamma^5)_{cb}}{2}$
$\bar{\mu}_a \quad \nu^{\mu}_b \quad W_F^-$	$-\frac{1}{2} \frac{i \cdot e \cdot M_{\mu} \cdot \sqrt{2}}{M_W \cdot s_w} \cdot \frac{(1-\gamma^5)_{ab}}{2}$
$\bar{\tau}_a \quad \tau_b \quad A_{\mu}$	$e \gamma_{ac}^{\mu} \cdot \delta_{cb}$
$\bar{\tau}_a \quad \tau_b \quad H$	$-\frac{1}{2} \frac{e \cdot M_{\tau}}{M_W \cdot s_w} \cdot \delta_{ab}$
$\bar{\tau}_a \quad \tau_b \quad Z_{\mu}$	$-\frac{1}{2} \frac{e}{c_w \cdot s_w} \gamma_{ac}^{\mu} ((1 - 2c_w^2) \cdot \frac{(1-\gamma^5)_{cb}}{2} + 2s_w^2 \cdot \frac{(1+\gamma^5)_{cb}}{2})$
$\bar{\tau}_a \quad \tau_b \quad Z_F$	$-\frac{1}{2} \frac{i \cdot e \cdot M_{\tau}}{M_W \cdot s_w} \cdot \gamma_{ab}^5$
$\bar{\tau}_a \quad \nu^{\tau}_b \quad W^-_{\mu}$	$-\frac{1}{2} \frac{e \cdot \sqrt{2}}{s_w} \cdot \gamma_{ac}^{\mu} \frac{(1-\gamma^5)_{cb}}{2}$
$\bar{\tau}_a \quad \nu^{\tau}_b \quad W_F^-$	$-\frac{1}{2} \frac{i \cdot e \cdot M_{\tau} \cdot \sqrt{2}}{M_W \cdot s_w} \cdot \frac{(1-\gamma^5)_{ab}}{2}$
$G_{\mu p} \quad G_{\nu q} \quad G_{\rho r}$	$g_s f_{pqr} (p_3^{\nu} g^{\mu\rho} - p_3^{\mu} g^{\nu\rho} + p_1^{\rho} g^{\mu\nu} - p_1^{\nu} g^{\mu\rho} - p_2^{\rho} g^{\mu\nu} + p_2^{\mu} g^{\nu\rho})$
$\bar{C}^G_p \quad C^G_q \quad G_{\mu r}$	$g_s \cdot p_2^{\mu} f_{pqr}$
$H \quad H \quad H$	$-\frac{3}{2} \frac{e \cdot M_H^2}{M_W \cdot s_w}$
$H \quad W^+_{\mu} \quad W^-_{\nu}$	$\frac{e \cdot M_W}{s_w} \cdot g^{\mu\nu}$
$H \quad W^+_{\mu} \quad W_F^-$	$\frac{1}{2} \frac{i \cdot e}{s_w} (p_3^{\mu} - p_1^{\mu})$
$H \quad W_F^+ \quad W^-_{\mu}$	$-\frac{1}{2} \frac{i \cdot e}{s_w} (p_1^{\mu} - p_2^{\mu})$
$H \quad W_F^+ \quad W_F^-$	$-\frac{1}{2} \frac{e \cdot M_H^2}{M_W \cdot s_w}$
$H \quad Z_{\mu} \quad Z_{\nu}$	$\frac{e \cdot M_W}{c_w^2 \cdot s_w} \cdot g^{\mu\nu}$

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$H \quad Z_\mu \quad Z_F$	$-\frac{1}{2} \frac{i \cdot e}{c_w \cdot s_w} (p_1^\mu - p_3^\mu)$
$H \quad Z_F \quad Z_F$	$-\frac{1}{2} \frac{e \cdot M_H^2}{M_W \cdot s_w}$
$H \quad \sim V_\mu^+ \quad \sim V_\nu^-$	$-2 \frac{M_W \cdot s_w \cdot \lambda_2}{e} \cdot g^{\mu\nu}$
$H \quad \sim V_{1\mu} \quad \sim V_{1\nu}$	$-2 \frac{M_W \cdot s_w}{e} g^{\mu\nu} (\lambda_2 + \lambda_3 + \lambda_4)$
$H \quad \sim V_{2\mu} \quad \sim V_{2\nu}$	$-2 \frac{M_W \cdot s_w}{e} g^{\mu\nu} (\lambda_2 + \lambda_3 - \lambda_4)$
$\bar{\nu}_a^e \quad e_b \quad W_\mu^+$	$-\frac{1}{2} \frac{e \cdot \sqrt{2}}{s_w} \cdot \gamma_{ac}^\mu \frac{(1-\gamma^5)_{cb}}{2}$
$\bar{\nu}_a^e \quad \nu_b^e \quad Z_\mu$	$-\frac{1}{2} \frac{e}{c_w \cdot s_w} \cdot \gamma_{ac}^\mu \frac{(1-\gamma^5)_{cb}}{2}$
$\bar{\nu}_a^\mu \quad \mu_b \quad W_\mu^+$	$-\frac{1}{2} \frac{e \cdot \sqrt{2}}{s_w} \cdot \gamma_{ac}^\mu \frac{(1-\gamma^5)_{cb}}{2}$
$\bar{\nu}_a^\mu \quad \mu_b \quad W_F^+$	$\frac{1}{2} \frac{i \cdot e \cdot M_\mu \cdot \sqrt{2}}{M_W \cdot s_w} \cdot \frac{(1+\gamma^5)_{ab}}{2}$
$\bar{\nu}_a^\mu \quad \nu_b^\mu \quad Z_\mu$	$-\frac{1}{2} \frac{e}{c_w \cdot s_w} \cdot \gamma_{ac}^\mu \frac{(1-\gamma^5)_{cb}}{2}$
$\bar{\nu}_a^\tau \quad \tau_b \quad W_\mu^+$	$-\frac{1}{2} \frac{e \cdot \sqrt{2}}{s_w} \cdot \gamma_{ac}^\mu \frac{(1-\gamma^5)_{cb}}{2}$
$\bar{\nu}_a^\tau \quad \tau_b \quad W_F^+$	$\frac{1}{2} \frac{i \cdot e \cdot M_\tau \cdot \sqrt{2}}{M_W \cdot s_w} \cdot \frac{(1+\gamma^5)_{ab}}{2}$
$\bar{\nu}_a^\tau \quad \nu_b^\tau \quad Z_\mu$	$-\frac{1}{2} \frac{e}{c_w \cdot s_w} \cdot \gamma_{ac}^\mu \frac{(1-\gamma^5)_{cb}}{2}$
$\bar{s}_{ap} \quad c_{bq} \quad W_\mu^-$	$-\frac{1}{2} \frac{e \cdot \sqrt{2}}{s_w} \cdot \delta_{pq} \gamma_{ac}^\mu \frac{(1-\gamma^5)_{cb}}{2}$
$\bar{s}_{ap} \quad c_{bq} \quad W_F^-$	$-\frac{1}{2} \frac{i \cdot e \cdot \sqrt{2}}{M_W \cdot s_w} \delta_{pq} (M_s \cdot \frac{(1-\gamma^5)_{ab}}{2} - M_c \cdot \frac{(1+\gamma^5)_{ab}}{2})$
$\bar{s}_{ap} \quad s_{bq} \quad A_\mu$	$\frac{1}{3} e \delta_{pq} \gamma_{ac}^\mu \cdot \delta_{cb}$
$\bar{s}_{ap} \quad s_{bq} \quad G_{\mu r}$	$g_s \cdot \lambda_{pq}^r \gamma_{ab}^\mu$
$\bar{s}_{ap} \quad s_{bq} \quad H$	$-\frac{1}{2} \frac{e \cdot M_s}{M_W \cdot s_w} \delta_{pq} \cdot \delta_{ab}$
$\bar{s}_{ap} \quad s_{bq} \quad Z_\mu$	$\frac{1}{6} \frac{e}{c_w \cdot s_w} \delta_{pq} \gamma_{ac}^\mu (2c_w^2 \cdot \frac{(1-\gamma^5)_{cb}}{2} + \frac{(1-\gamma^5)_{cb}}{2} - 2s_w^2 \cdot \frac{(1+\gamma^5)_{cb}}{2})$
$\bar{s}_{ap} \quad s_{bq} \quad Z_F$	$-\frac{1}{2} \frac{i \cdot e \cdot M_s}{M_W \cdot s_w} \delta_{pq} \cdot \gamma_{ab}^5$
$\bar{t}_{ap} \quad b_{bq} \quad W_\mu^+$	$-\frac{1}{2} \frac{e \cdot \sqrt{2}}{s_w} \cdot \delta_{pq} \gamma_{ac}^\mu \frac{(1-\gamma^5)_{cb}}{2}$
$\bar{t}_{ap} \quad b_{bq} \quad W_F^+$	$\frac{1}{2} \frac{i \cdot e \cdot \sqrt{2}}{M_W \cdot s_w} \delta_{pq} (M_b \cdot \frac{(1+\gamma^5)_{ab}}{2} - M_t \cdot \frac{(1-\gamma^5)_{ab}}{2})$
$\bar{t}_{ap} \quad t_{bq} \quad A_\mu$	$-\frac{2}{3} e \delta_{pq} \gamma_{ac}^\mu \cdot \delta_{cb}$
$\bar{t}_{ap} \quad t_{bq} \quad G_{\mu r}$	$g_s \cdot \lambda_{pq}^r \gamma_{ab}^\mu$
$\bar{t}_{ap} \quad t_{bq} \quad H$	$-\frac{1}{2} \frac{e \cdot M_t}{M_W \cdot s_w} \delta_{pq} \cdot \delta_{ab}$

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$\bar{t}_{ap} \quad t_{bq} \quad Z_\mu$	$-\frac{1}{6} \frac{e}{c_w \cdot s_w} \delta_{pq} \gamma_{ac}^\mu (4c_w^2 \cdot \frac{(1-\gamma^5)_{cb}}{2} - \frac{(1-\gamma^5)_{cb}}{2} - 4s_w^2 \cdot \frac{(1+\gamma^5)_{cb}}{2})$
$\bar{t}_{ap} \quad t_{bq} \quad Z_F$	$\frac{1}{2} \frac{i \cdot e \cdot M_t}{M_W \cdot s_w} \delta_{pq} \cdot \gamma_{ab}^5$
$\bar{u}_{ap} \quad d_{bq} \quad W_\mu^+$	$-\frac{1}{2} \frac{e \cdot \sqrt{2}}{s_w} \cdot \delta_{pq} \gamma_{ac}^\mu \frac{(1-\gamma^5)_{cb}}{2}$
$\bar{u}_{ap} \quad d_{bq} \quad W_F^+$	$\frac{1}{2} \frac{i \cdot e \cdot \sqrt{2}}{M_W \cdot s_w} \delta_{pq} (M d \cdot \frac{(1+\gamma^5)_{ab}}{2} - M u \cdot \frac{(1-\gamma^5)_{ab}}{2})$
$\bar{u}_{ap} \quad u_{bq} \quad A_\mu$	$-\frac{2}{3} e \delta_{pq} \gamma_{ac}^\mu \cdot \delta_{cb}$
$\bar{u}_{ap} \quad u_{bq} \quad G_{\mu r}$	$g_s \cdot \lambda_{pq}^r \gamma_{ab}^\mu$
$\bar{u}_{ap} \quad u_{bq} \quad H$	$-\frac{1}{2} \frac{e \cdot M u}{M_W \cdot s_w} \delta_{pq} \cdot \delta_{ab}$
$\bar{u}_{ap} \quad u_{bq} \quad Z_\mu$	$-\frac{1}{6} \frac{e}{c_w \cdot s_w} \delta_{pq} \gamma_{ac}^\mu (4c_w^2 \cdot \frac{(1-\gamma^5)_{cb}}{2} - \frac{(1-\gamma^5)_{cb}}{2} - 4s_w^2 \cdot \frac{(1+\gamma^5)_{cb}}{2})$
$\bar{u}_{ap} \quad u_{bq} \quad Z_F$	$\frac{1}{2} \frac{i \cdot e \cdot M u}{M_W \cdot s_w} \delta_{pq} \cdot \gamma_{ab}^5$
$W_\mu^+ \quad W_\nu^- \quad Z_\rho$	$-\frac{c_w \cdot e}{s_w} (p_1^\nu g^{\mu\rho} - p_1^\rho g^{\mu\nu} - p_2^\mu g^{\nu\rho} + p_2^\rho g^{\mu\nu} + p_3^\mu g^{\nu\rho} - p_3^\nu g^{\mu\rho})$
$W_\mu^+ \quad W_F^- \quad Z_\nu$	$-\frac{i \cdot e \cdot M_W \cdot s_w}{c_w} \cdot g^{\mu\nu}$
$W_\mu^+ \quad W_F^- \quad Z_F$	$-\frac{1}{2} \frac{e}{s_w} (p_2^\mu - p_3^\mu)$
$W_\mu^+ \quad \sim V_\nu^- \quad \sim V_{1\rho}$	$-\frac{1}{2} \frac{i \cdot e}{s_w} (p_2^\mu g^{\nu\rho} - p_3^\mu g^{\nu\rho} - p_2^\rho g^{\mu\nu} + p_3^\nu g^{\mu\rho} - p_1^\nu g^{\mu\rho} + p_1^\rho g^{\mu\nu})$
$W_\mu^+ \quad \sim V_\nu^- \quad \sim V_{2\rho}$	$\frac{1}{2} \frac{e}{s_w} (p_2^\mu g^{\nu\rho} - p_3^\mu g^{\nu\rho} - p_2^\rho g^{\mu\nu} + p_3^\nu g^{\mu\rho} - p_1^\nu g^{\mu\rho} + p_1^\rho g^{\mu\nu})$
$\bar{C}^{W+} \quad C^Z \quad W_\mu^-$	$e \cdot p_1^\mu$
$\bar{C}^{W+} \quad C^Z \quad W_F^-$	$-i \cdot e \cdot M_W$
$\bar{C}^{W+} \quad C^{W-} \quad A_\mu$	$-e \cdot p_1^\mu$
$\bar{C}^{W+} \quad C^{W-} \quad H$	$-\frac{1}{2} \frac{e \cdot M_W}{s_w}$
$\bar{C}^{W+} \quad C^{W-} \quad Z_\mu$	$-\frac{c_w \cdot e}{s_w} \cdot p_1^\mu$
$\bar{C}^{W+} \quad C^{W-} \quad Z_F$	$\frac{1}{2} \frac{i \cdot e \cdot M_W}{s_w}$
$\bar{C}^{W+} \quad C^Z \quad W_\mu^-$	$\frac{c_w \cdot e}{s_w} \cdot p_1^\mu$
$\bar{C}^{W+} \quad C^Z \quad W_F^-$	$\frac{1}{2} \frac{i \cdot (1-2c_w^2) \cdot e \cdot M_W}{c_w \cdot s_w}$
$W_F^+ \quad W_\mu^- \quad Z_\nu$	$\frac{i \cdot e \cdot M_W \cdot s_w}{c_w} \cdot g^{\mu\nu}$
$W_F^+ \quad W_\mu^- \quad Z_F$	$-\frac{1}{2} \frac{e}{s_w} (p_3^\mu - p_1^\mu)$
$W_F^+ \quad W_F^- \quad Z_\mu$	$-\frac{1}{2} \frac{(1-2c_w^2) \cdot e}{c_w \cdot s_w} (p_2^\mu - p_1^\mu)$

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$W_F^+ \sim V_{\mu}^- \sim V_{1\nu}$	$-\frac{M_W \cdot s_w}{e} g^{\mu\nu} (\lambda_3 + \lambda_4)$
$W_F^+ \sim V_{\mu}^- \sim V_{2\nu}$	$-\frac{i \cdot M_W \cdot s_w}{e} g^{\mu\nu} (\lambda_3 - \lambda_4)$
$W_{\mu}^- \sim V_{\nu}^+ \sim V_{1\rho}$	$\frac{1}{2} \frac{i \cdot e}{s_w} (p_3^{\mu} g^{\nu\rho} - p_2^{\mu} g^{\nu\rho} - p_3^{\nu} g^{\mu\rho} + p_2^{\rho} g^{\mu\nu} - p_1^{\rho} g^{\mu\nu} + p_1^{\nu} g^{\mu\rho})$
$W_{\mu}^- \sim V_{\nu}^+ \sim V_{2\rho}$	$\frac{1}{2} \frac{e}{s_w} (p_3^{\mu} g^{\nu\rho} - p_2^{\mu} g^{\nu\rho} - p_3^{\nu} g^{\mu\rho} + p_2^{\rho} g^{\mu\nu} - p_1^{\rho} g^{\mu\nu} + p_1^{\nu} g^{\mu\rho})$
$\bar{C}^{W-} \quad C^Z \quad W_{\mu}^+$	$-e \cdot p_1^{\mu}$
$\bar{C}^{W-} \quad C^Z \quad W_F^+$	$i \cdot e \cdot M_W$
$\bar{C}^{W-} \quad C^{W+} \quad A_{\mu}$	$e \cdot p_1^{\mu}$
$\bar{C}^{W-} \quad C^{W+} \quad H$	$-\frac{1}{2} \frac{e \cdot M_W}{s_w}$
$\bar{C}^{W-} \quad C^{W+} \quad Z_{\mu}$	$\frac{c_w \cdot e}{s_w} \cdot p_1^{\mu}$
$\bar{C}^{W-} \quad C^{W+} \quad Z_F$	$-\frac{1}{2} \frac{i \cdot e \cdot M_W}{s_w}$
$\bar{C}^{W-} \quad C^Z \quad W_{\mu}^+$	$-\frac{c_w \cdot e}{s_w} \cdot p_1^{\mu}$
$\bar{C}^{W-} \quad C^Z \quad W_F^+$	$-\frac{1}{2} \frac{i \cdot (1-2c_w^2) \cdot e \cdot M_W}{c_w \cdot s_w}$
$W_F^- \sim V_{\mu}^+ \sim V_{1\nu}$	$-\frac{M_W \cdot s_w}{e} g^{\mu\nu} (\lambda_3 + \lambda_4)$
$W_F^- \sim V_{\mu}^+ \sim V_{2\nu}$	$\frac{i \cdot M_W \cdot s_w}{e} g^{\mu\nu} (\lambda_3 - \lambda_4)$
$Z_{\mu} \sim V_{\nu}^+ \sim V_{\rho}^-$	$\frac{1}{2} \frac{(1-2c_w^2) \cdot e}{c_w \cdot s_w} (p_3^{\mu} g^{\nu\rho} - p_2^{\mu} g^{\nu\rho} - p_3^{\nu} g^{\mu\rho} + p_2^{\rho} g^{\mu\nu} - p_1^{\rho} g^{\mu\nu} + p_1^{\nu} g^{\mu\rho})$
$Z_{\mu} \sim V_{1\nu} \sim V_{2\rho}$	$\frac{1}{2} \frac{i \cdot e}{c_w \cdot s_w} (p_2^{\mu} g^{\nu\rho} - p_3^{\mu} g^{\nu\rho} - p_2^{\rho} g^{\mu\nu} + p_3^{\rho} g^{\mu\nu} - p_1^{\nu} g^{\mu\rho} + p_1^{\rho} g^{\mu\nu})$
$\bar{C}^Z \quad C^{W+} \quad W_{\mu}^-$	$-\frac{c_w \cdot e}{s_w} \cdot p_1^{\mu}$
$\bar{C}^Z \quad C^{W+} \quad W_F^-$	$\frac{1}{2} \frac{i \cdot e \cdot M_W}{c_w \cdot s_w}$
$\bar{C}^Z \quad C^{W-} \quad W_{\mu}^+$	$\frac{c_w \cdot e}{s_w} \cdot p_1^{\mu}$
$\bar{C}^Z \quad C^{W-} \quad W_F^+$	$-\frac{1}{2} \frac{i \cdot e \cdot M_W}{c_w \cdot s_w}$
$\bar{C}^Z \quad C^Z \quad H$	$-\frac{1}{2} \frac{e \cdot M_W}{c_w^2 \cdot s_w}$
$Z_F \sim V_{1\mu} \sim V_{2\nu}$	$-2 \frac{M_W \cdot s_w \cdot \lambda_4}{e} \cdot g^{\mu\nu}$
$A_{\mu} \quad A_{\nu} \quad W_{\rho}^+ \quad W_{\sigma}^-$	$-e^2 (2g^{\mu\nu} g^{\rho\sigma} - g^{\mu\rho} g^{\nu\sigma} - g^{\mu\sigma} g^{\nu\rho})$
$A_{\mu} \quad A_{\nu} \quad W_F^+ \quad W_F^-$	$2e^2 \cdot g^{\mu\nu}$
$A_{\mu} \quad A_{\nu} \sim V_{\rho}^+ \sim V_{\sigma}^-$	$-e^2 (2g^{\mu\nu} g^{\rho\sigma} - g^{\mu\sigma} g^{\nu\rho} - g^{\mu\rho} g^{\nu\sigma})$

Fields in the vertex	Variational derivative of Lagrangian by fields
$A_\mu \quad H \quad W^+_\nu \quad W^-_F$	$\frac{1}{2} \frac{i \cdot e^2}{s_w} \cdot g^{\mu\nu}$
$A_\mu \quad H \quad W^+_F \quad W^-_\nu$	$-\frac{1}{2} \frac{i \cdot e^2}{s_w} \cdot g^{\mu\nu}$
$A_\mu \quad W^+_\nu \quad W^-_\rho \quad Z_\sigma$	$-\frac{c_w \cdot e^2}{s_w} (2g^{\mu\sigma} g^{\nu\rho} - g^{\mu\nu} g^{\rho\sigma} - g^{\mu\rho} g^{\nu\sigma})$
$A_\mu \quad W^+_\nu \quad W^-_F \quad Z_F$	$-\frac{1}{2} \frac{e^2}{s_w} \cdot g^{\mu\nu}$
$A_\mu \quad W^+_\nu \quad \sim V^-_\rho \quad \sim V_{1\sigma}$	$-\frac{1}{2} \frac{i \cdot e^2}{s_w} (g^{\mu\nu} g^{\rho\sigma} - 2g^{\mu\sigma} g^{\nu\rho} + g^{\mu\rho} g^{\nu\sigma})$
$A_\mu \quad W^+_\nu \quad \sim V^-_\rho \quad \sim V_{2\sigma}$	$\frac{1}{2} \frac{e^2}{s_w} (g^{\mu\nu} g^{\rho\sigma} - 2g^{\mu\sigma} g^{\nu\rho} + g^{\mu\rho} g^{\nu\sigma})$
$A_\mu \quad W^+_F \quad W^-_\nu \quad Z_F$	$-\frac{1}{2} \frac{e^2}{s_w} \cdot g^{\mu\nu}$
$A_\mu \quad W^+_F \quad W^-_F \quad Z_\nu$	$-\frac{(1-2c_w^2) \cdot e^2}{c_w \cdot s_w} \cdot g^{\mu\nu}$
$A_\mu \quad W^-_\nu \quad \sim V^+_\rho \quad \sim V_{1\sigma}$	$\frac{1}{2} \frac{i \cdot e^2}{s_w} (g^{\mu\nu} g^{\rho\sigma} - 2g^{\mu\sigma} g^{\nu\rho} + g^{\mu\rho} g^{\nu\sigma})$
$A_\mu \quad W^-_\nu \quad \sim V^+_\rho \quad \sim V_{2\sigma}$	$\frac{1}{2} \frac{e^2}{s_w} (g^{\mu\nu} g^{\rho\sigma} - 2g^{\mu\sigma} g^{\nu\rho} + g^{\mu\rho} g^{\nu\sigma})$
$A_\mu \quad Z_\nu \quad \sim V^+_\rho \quad \sim V^-_\sigma$	$\frac{1}{2} \frac{(1-2c_w^2) \cdot e^2}{c_w \cdot s_w} (2g^{\mu\nu} g^{\rho\sigma} - g^{\mu\sigma} g^{\nu\rho} - g^{\mu\rho} g^{\nu\sigma})$
$G_{\mu p} \quad G_{\nu q} \quad G_{\rho r} \quad G_{\sigma s}$	$g_s^2 (g^{\mu\rho} g^{\nu\sigma} f_{pqt} f_{rst} - g^{\mu\sigma} g^{\nu\rho} f_{pqt} f_{rst} + g^{\mu\nu} g^{\rho\sigma} f_{prt} f_{qst} - g^{\mu\sigma} g^{\nu\rho} f_{prt} f_{qst} + g^{\mu\nu} g^{\rho\sigma} f_{pst} f_{qrt} - g^{\mu\rho} g^{\nu\sigma} f_{pst} f_{qrt})$
$H \quad H \quad H \quad H$	$-\frac{3}{4} \frac{e^2 \cdot M_H^2}{M_W^2 \cdot s_w^2}$
$H \quad H \quad W^+_\mu \quad W^-_\nu$	$\frac{1}{2} \frac{e^2}{s_w^2} \cdot g^{\mu\nu}$
$H \quad H \quad W^+_F \quad W^-_F$	$-\frac{1}{4} \frac{e^2 \cdot M_H^2}{M_W^2 \cdot s_w^2}$
$H \quad H \quad Z_\mu \quad Z_\nu$	$\frac{1}{2} \frac{e^2}{c_w^2 \cdot s_w^2} \cdot g^{\mu\nu}$
$H \quad H \quad Z_F \quad Z_F$	$-\frac{1}{4} \frac{e^2 \cdot M_H^2}{M_W^2 \cdot s_w^2}$
$H \quad H \quad \sim V^+_\mu \quad \sim V^-_\nu$	$-\lambda_2 \cdot g^{\mu\nu}$
$H \quad H \quad \sim V_{1\mu} \quad \sim V_{1\nu}$	$-g^{\mu\nu} (\lambda_2 + \lambda_3 + \lambda_4)$
$H \quad H \quad \sim V_{2\mu} \quad \sim V_{2\nu}$	$-g^{\mu\nu} (\lambda_2 + \lambda_3 - \lambda_4)$
$H \quad W^+_\mu \quad W^-_F \quad Z_\nu$	$-\frac{1}{2} \frac{i \cdot e^2}{c_w} \cdot g^{\mu\nu}$
$H \quad W^+_F \quad W^-_\mu \quad Z_\nu$	$\frac{1}{2} \frac{i \cdot e^2}{c_w} \cdot g^{\mu\nu}$
$H \quad W^+_F \quad \sim V^-_\mu \quad \sim V_{1\nu}$	$-\frac{1}{2} g^{\mu\nu} (\lambda_3 + \lambda_4)$
$H \quad W^+_F \quad \sim V^-_\mu \quad \sim V_{2\nu}$	$-\frac{1}{2} i g^{\mu\nu} (\lambda_3 - \lambda_4)$

Fields in the vertex	Variational derivative of Lagrangian by fields
$H \quad W_F^- \quad \sim V^+_{\mu} \quad \sim V_{1\nu}$	$-\frac{1}{2}g^{\mu\nu}(\lambda_3 + \lambda_4)$
$H \quad W_F^- \quad \sim V^+_{\mu} \quad \sim V_{2\nu}$	$\frac{1}{2}ig^{\mu\nu}(\lambda_3 - \lambda_4)$
$H \quad Z_F \quad \sim V_{1\mu} \quad \sim V_{2\nu}$	$-\lambda_4 \cdot g^{\mu\nu}$
$W^+_{\mu} \quad W^+_{\nu} \quad W^-_{\rho} \quad W^-_{\sigma}$	$\frac{e^2}{s_w^2}(2g^{\mu\nu}g^{\rho\sigma} - g^{\mu\sigma}g^{\nu\rho} - g^{\mu\rho}g^{\nu\sigma})$
$W^+_{\mu} \quad W_F^+ \quad W^-_{\nu} \quad W_F^-$	$\frac{1}{2}\frac{e^2}{s_w^2} \cdot g^{\mu\nu}$
$W^+_{\mu} \quad W^-_{\nu} \quad Z_{\rho} \quad Z_{\sigma}$	$-\frac{c_w^2 \cdot e^2}{s_w^2}(2g^{\mu\nu}g^{\rho\sigma} - g^{\mu\rho}g^{\nu\sigma} - g^{\mu\sigma}g^{\nu\rho})$
$W^+_{\mu} \quad W^-_{\nu} \quad Z_F \quad Z_F$	$\frac{1}{2}\frac{e^2}{s_w^2} \cdot g^{\mu\nu}$
$W^+_{\mu} \quad W^-_{\nu} \quad \sim V^+_{\rho} \quad \sim V^-_{\sigma}$	$-\frac{1}{2}\frac{e^2}{s_w^2}(g^{\mu\nu}g^{\rho\sigma} - 2g^{\mu\rho}g^{\nu\sigma} + g^{\mu\sigma}g^{\nu\rho})$
$W^+_{\mu} \quad W^-_{\nu} \quad \sim V_{1\rho} \quad \sim V_{1\sigma}$	$-\frac{1}{4}\frac{e^2}{s_w^2}(2g^{\mu\nu}g^{\rho\sigma} - g^{\mu\sigma}g^{\nu\rho} - g^{\mu\rho}g^{\nu\sigma})$
$W^+_{\mu} \quad W^-_{\nu} \quad \sim V_{1\rho} \quad \sim V_{2\sigma}$	$\frac{3}{4}\frac{i \cdot e^2}{s_w^2}(g^{\mu\rho}g^{\nu\sigma} - g^{\mu\sigma}g^{\nu\rho})$
$W^+_{\mu} \quad W^-_{\nu} \quad \sim V_{2\rho} \quad \sim V_{2\sigma}$	$-\frac{1}{4}\frac{e^2}{s_w^2}(2g^{\mu\nu}g^{\rho\sigma} - g^{\mu\sigma}g^{\nu\rho} - g^{\mu\rho}g^{\nu\sigma})$
$W^+_{\mu} \quad W_F^- \quad Z_{\nu} \quad Z_F$	$\frac{1}{2}\frac{e^2}{c_w} \cdot g^{\mu\nu}$
$W^+_{\mu} \quad Z_{\nu} \quad \sim V^-_{\rho} \quad \sim V_{1\sigma}$	$\frac{1}{4}\frac{i \cdot e^2}{c_w \cdot s_w^2}(2s_w^2 \cdot g^{\mu\nu}g^{\rho\sigma} + 4c_w^2 \cdot g^{\mu\rho}g^{\nu\sigma} - g^{\mu\rho}g^{\nu\sigma} - 2c_w^2 \cdot g^{\mu\sigma}g^{\nu\rho} - g^{\mu\sigma}g^{\nu\rho})$
$W^+_{\mu} \quad Z_{\nu} \quad \sim V^-_{\rho} \quad \sim V_{2\sigma}$	$-\frac{1}{4}\frac{e^2}{c_w \cdot s_w^2}(2s_w^2 \cdot g^{\mu\nu}g^{\rho\sigma} + 4c_w^2 \cdot g^{\mu\rho}g^{\nu\sigma} - g^{\mu\rho}g^{\nu\sigma} - 2c_w^2 \cdot g^{\mu\sigma}g^{\nu\rho} - g^{\mu\sigma}g^{\nu\rho})$
$W_F^+ \quad W_F^+ \quad W_F^- \quad W_F^-$	$-\frac{1}{2}\frac{e^2 \cdot M_H^2}{M_W^2 \cdot s_w^2}$
$W_F^+ \quad W_F^+ \quad \sim V^-_{\mu} \quad \sim V^-_{\nu}$	$-2\lambda_4 \cdot g^{\mu\nu}$
$W_F^+ \quad W^-_{\mu} \quad Z_{\nu} \quad Z_F$	$\frac{1}{2}\frac{e^2}{c_w} \cdot g^{\mu\nu}$
$W_F^+ \quad W_F^- \quad Z_{\mu} \quad Z_{\nu}$	$\frac{1}{2}\frac{(1-2c_w^2)^2 \cdot e^2}{c_w^2 \cdot s_w^2} \cdot g^{\mu\nu}$
$W_F^+ \quad W_F^- \quad Z_F \quad Z_F$	$-\frac{1}{4}\frac{e^2 \cdot M_H^2}{M_W^2 \cdot s_w^2}$
$W_F^+ \quad W_F^- \quad \sim V^+_{\mu} \quad \sim V^-_{\nu}$	$-g^{\mu\nu}(\lambda_2 + \lambda_3)$
$W_F^+ \quad W_F^- \quad \sim V_{1\mu} \quad \sim V_{1\nu}$	$-\lambda_2 \cdot g^{\mu\nu}$
$W_F^+ \quad W_F^- \quad \sim V_{2\mu} \quad \sim V_{2\nu}$	$-\lambda_2 \cdot g^{\mu\nu}$
$W_F^+ \quad Z_F \quad \sim V^-_{\mu} \quad \sim V_{1\nu}$	$\frac{1}{2}ig^{\mu\nu}(\lambda_3 - \lambda_4)$

Fields in the vertex	Variational derivative of Lagrangian by fields
$W_F^+ \quad Z_F \quad \sim V_{\mu}^- \quad \sim V_{2\nu}$	$-\frac{1}{2}g^{\mu\nu}(\lambda_3 + \lambda_4)$
$W_{\mu}^- \quad Z_{\nu} \quad \sim V_{\rho}^+ \quad \sim V_{1\sigma}$	$-\frac{1}{4}\frac{i \cdot e^2}{c_w \cdot s_w^2}(2s_w^2 \cdot g^{\mu\nu}g^{\rho\sigma} - 2c_w^2 \cdot g^{\mu\sigma}g^{\nu\rho} - g^{\mu\sigma}g^{\nu\rho} + 4c_w^2 \cdot g^{\mu\rho}g^{\nu\sigma} - g^{\mu\rho}g^{\nu\sigma})$
$W_{\mu}^- \quad Z_{\nu} \quad \sim V_{\rho}^+ \quad \sim V_{2\sigma}$	$-\frac{1}{4}\frac{e^2}{c_w \cdot s_w^2}(2s_w^2 \cdot g^{\mu\nu}g^{\rho\sigma} - 2c_w^2 \cdot g^{\mu\sigma}g^{\nu\rho} - g^{\mu\sigma}g^{\nu\rho} + 4c_w^2 \cdot g^{\mu\rho}g^{\nu\sigma} - g^{\mu\rho}g^{\nu\sigma})$
$W_F^- \quad W_F^- \quad \sim V_{\mu}^+ \quad \sim V_{\nu}^+$	$-2\lambda_4 \cdot g^{\mu\nu}$
$W_F^- \quad Z_F \quad \sim V_{\mu}^+ \quad \sim V_{1\nu}$	$-\frac{1}{2}ig^{\mu\nu}(\lambda_3 - \lambda_4)$
$W_F^- \quad Z_F \quad \sim V_{\mu}^+ \quad \sim V_{2\nu}$	$-\frac{1}{2}g^{\mu\nu}(\lambda_3 + \lambda_4)$
$Z_{\mu} \quad Z_{\nu} \quad Z_F \quad Z_F$	$\frac{1}{2}\frac{e^2}{c_w^2 \cdot s_w^2} \cdot g^{\mu\nu}$
$Z_{\mu} \quad Z_{\nu} \quad \sim V_{\rho}^+ \quad \sim V_{\sigma}^-$	$-\frac{1}{4}\frac{(1-2c_w^2)^2 \cdot e^2}{c_w^2 \cdot s_w^2}(2g^{\mu\nu}g^{\rho\sigma} - g^{\mu\sigma}g^{\nu\rho} - g^{\mu\rho}g^{\nu\sigma})$
$Z_{\mu} \quad Z_{\nu} \quad \sim V_{1\rho} \quad \sim V_{1\sigma}$	$-\frac{1}{4}\frac{e^2}{c_w^2 \cdot s_w^2}(2g^{\mu\nu}g^{\rho\sigma} - g^{\mu\sigma}g^{\nu\rho} - g^{\mu\rho}g^{\nu\sigma})$
$Z_{\mu} \quad Z_{\nu} \quad \sim V_{2\rho} \quad \sim V_{2\sigma}$	$-\frac{1}{4}\frac{e^2}{c_w^2 \cdot s_w^2}(2g^{\mu\nu}g^{\rho\sigma} - g^{\mu\sigma}g^{\nu\rho} - g^{\mu\rho}g^{\nu\sigma})$
$Z_F \quad Z_F \quad Z_F \quad Z_F$	$-\frac{3}{4}\frac{e^2 \cdot M_H^2}{M_W^2 \cdot s_w^2}$
$Z_F \quad Z_F \quad \sim V_{\mu}^+ \quad \sim V_{\nu}^-$	$-\lambda_2 \cdot g^{\mu\nu}$
$Z_F \quad Z_F \quad \sim V_{1\mu} \quad \sim V_{1\nu}$	$-g^{\mu\nu}(\lambda_2 + \lambda_3 - \lambda_4)$
$Z_F \quad Z_F \quad \sim V_{2\mu} \quad \sim V_{2\nu}$	$-g^{\mu\nu}(\lambda_2 + \lambda_3 + \lambda_4)$
$\sim V_{\mu}^+ \quad \sim V_{\nu}^+ \quad \sim V_{\rho}^- \quad \sim V_{\sigma}^-$	$-2(\alpha_2 \cdot g^{\mu\rho}g^{\nu\sigma} + \alpha_3 \cdot g^{\mu\rho}g^{\nu\sigma} + \alpha_2 \cdot g^{\mu\sigma}g^{\nu\rho} + \alpha_3 \cdot g^{\mu\sigma}g^{\nu\rho})$
$\sim V_{\mu}^+ \quad \sim V_{\nu}^- \quad \sim V_{1\rho} \quad \sim V_{1\sigma}$	$-(2\alpha_2 \cdot g^{\mu\nu}g^{\rho\sigma} + \alpha_3 \cdot g^{\mu\rho}g^{\nu\sigma} + \alpha_3 \cdot g^{\mu\sigma}g^{\nu\rho})$
$\sim V_{\mu}^+ \quad \sim V_{\nu}^- \quad \sim V_{1\rho} \quad \sim V_{2\sigma}$	$i \cdot \alpha_3(g^{\mu\sigma}g^{\nu\rho} - g^{\mu\rho}g^{\nu\sigma})$
$\sim V_{\mu}^+ \quad \sim V_{\nu}^- \quad \sim V_{2\rho} \quad \sim V_{2\sigma}$	$-(2\alpha_2 \cdot g^{\mu\nu}g^{\rho\sigma} + \alpha_3 \cdot g^{\mu\rho}g^{\nu\sigma} + \alpha_3 \cdot g^{\mu\sigma}g^{\nu\rho})$
$\sim V_{1\mu} \quad \sim V_{1\nu} \quad \sim V_{1\rho} \quad \sim V_{1\sigma}$	$-2(\alpha_2 \cdot g^{\mu\nu}g^{\rho\sigma} + \alpha_3 \cdot g^{\mu\nu}g^{\rho\sigma} + \alpha_2 \cdot g^{\mu\rho}g^{\nu\sigma} + \alpha_3 \cdot g^{\mu\rho}g^{\nu\sigma} + \alpha_2 \cdot g^{\mu\sigma}g^{\nu\rho} + \alpha_3 \cdot g^{\mu\sigma}g^{\nu\rho})$
$\sim V_{1\mu} \quad \sim V_{1\nu} \quad \sim V_{2\rho} \quad \sim V_{2\sigma}$	$-2g^{\mu\nu}g^{\rho\sigma}(\alpha_2 + \alpha_3)$
$\sim V_{2\mu} \quad \sim V_{2\nu} \quad \sim V_{2\rho} \quad \sim V_{2\sigma}$	$-2(\alpha_2 \cdot g^{\mu\nu}g^{\rho\sigma} + \alpha_3 \cdot g^{\mu\nu}g^{\rho\sigma} + \alpha_2 \cdot g^{\mu\rho}g^{\nu\sigma} + \alpha_3 \cdot g^{\mu\rho}g^{\nu\sigma} + \alpha_2 \cdot g^{\mu\sigma}g^{\nu\rho} + \alpha_3 \cdot g^{\mu\sigma}g^{\nu\rho})$