F Statistic in PROC GLIMMIX

PROC GLIMMIX does not compute the sums of squares as PROC GLM does. Therefore, you do not see Sums of Squares in the Test of Fixed Effects table. The *F* statistic for the fixed effect is computed as:

$$F = \frac{\hat{\beta}'L'(LQ^-L')^-L\hat{\beta}}{rank(LQL)}$$, where

β is the vector of the fixed-effect estimates.
L is the coefficient matrix used to test for the fixed effects.
Q depends on the estimation method and options.

For a linear mixed model, $Q = (X'\hat{V}^{-1}X)$. This statistic accounts for all variance components in the model as indicated by $\hat{V}$ in the equation.

Close