

$$\ddot{\mathbf{r}}_G^{1/2}\ddot{\mathbf{r}}_G^{1/2}\ddot{\mathbf{r}}_G^{1/2}\ddot{\mathbf{r}}_G^{1/2}\$ \ddot{\mathbf{r}}_G^{1/2}\ddot{\mathbf{r}}_G^{1/2}$$