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A *Tutte function* of matroids is a function $F : \mathcal{M} \rightarrow L$, from an arbitrary minor-closed class \mathcal{M} of matroids to a module L over a commutative ring B , that satisfies the *parametrized deletion-contraction law* $F(M) = \gamma_e F(M \setminus e) + \delta_e F(M/e)$ for every matroid $M \in \mathcal{M}$ and every point e in M that is neither a loop nor a coloop. Here γ_e and δ_e are arbitrary but fixed values in B . F is *multiplicative* if L is a commutative B -algebra and F also satisfies $F(M_1 \oplus M_2) = F(M_1)F(M_2)$. We are classifying all Tutte functions, following up previous work of Zaslavsky (1992) and Ellis-Monaghan–Traldi (2006) on multiplicative Tutte functions on relatively “large” classes \mathcal{M} of matroids, and Bollobás and Riordan (1999) on slightly restricted Tutte functions of graphic matroids with relatively “large” domain \mathcal{M} . (Received January 06, 2010)