

# Vector valued Jacobi forms of degree two of index one

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*Abstract.* We consider the Taylor expansion and the theta expansion of vector valued Jacobi forms of degree two and index one. Then we apply this to give structures and dimension formulas for those forms, showing that the Taylor coefficients are essentially in a direct product of vector valued Siegel modular forms of various weights with some extra conditions. To show these connections, we use differential operators and the surjectivity of the Witt operator.