

Figure 1 illustrates the floating-point number format. The format is divided into four main sections: the sign of the exponent (j_f), the numerical part of the exponent ($j_1 j_2 \dots j_m$), the sign of the mantissa (S_f), and the numerical part of the mantissa ($S_1 S_2 \dots S_n$). The total length of the exponent part is j , and the total length of the mantissa part is S . A vertical line indicates the decimal point position between the exponent and mantissa sections.