

TPS563209

8.2.2.2.1 Output Filter Selection

Table 4. Recommended Component Values

OUTPUT VOLTAGE (V)	R2 (kΩ)	R3 (kΩ)	L1 (μH)			C5 + C6 + C7 (μF)
			MIN	TYP	MAX	
1	3.09	10.0	1.0	1.5	4.7	20 - 68
1.05	3.74	10.0	1.0	1.5	4.7	20 - 68
1.2	5.76	10.0	1.0	1.5	4.7	20 - 68
1.5	9.53	10.0	1.0	1.5	4.7	20 - 68
1.8	13.7	10.0	1.5	2.2	4.7	20 - 68
2.5	22.6	10.0	1.5	2.2	4.7	20 - 68
3.3	33.2	10.0	1.5	2.2	4.7	20 - 68
5	54.9	10.0	2.2	3.3	4.7	20 - 68
6.5	75	10.0	2.2	3.3	4.7	20 - 68

TPS53014

OUTPUT CAPACITOR

The capacitor value and ESR determines the amount of output voltage ripple and load transient response. Ceramic output capacitors with X5R dielectric or better are recommended .

$$C_{OUT} = \frac{I_{(RIPPLE)}}{8 \times V_{OUT(RIPPLE)}} \times \frac{1}{f_{SW}}$$