

TPS51216

SLUSAB9A –NOVEMBER 2010 –REVISED APRIL 2013

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TPS51216 Application Circuit

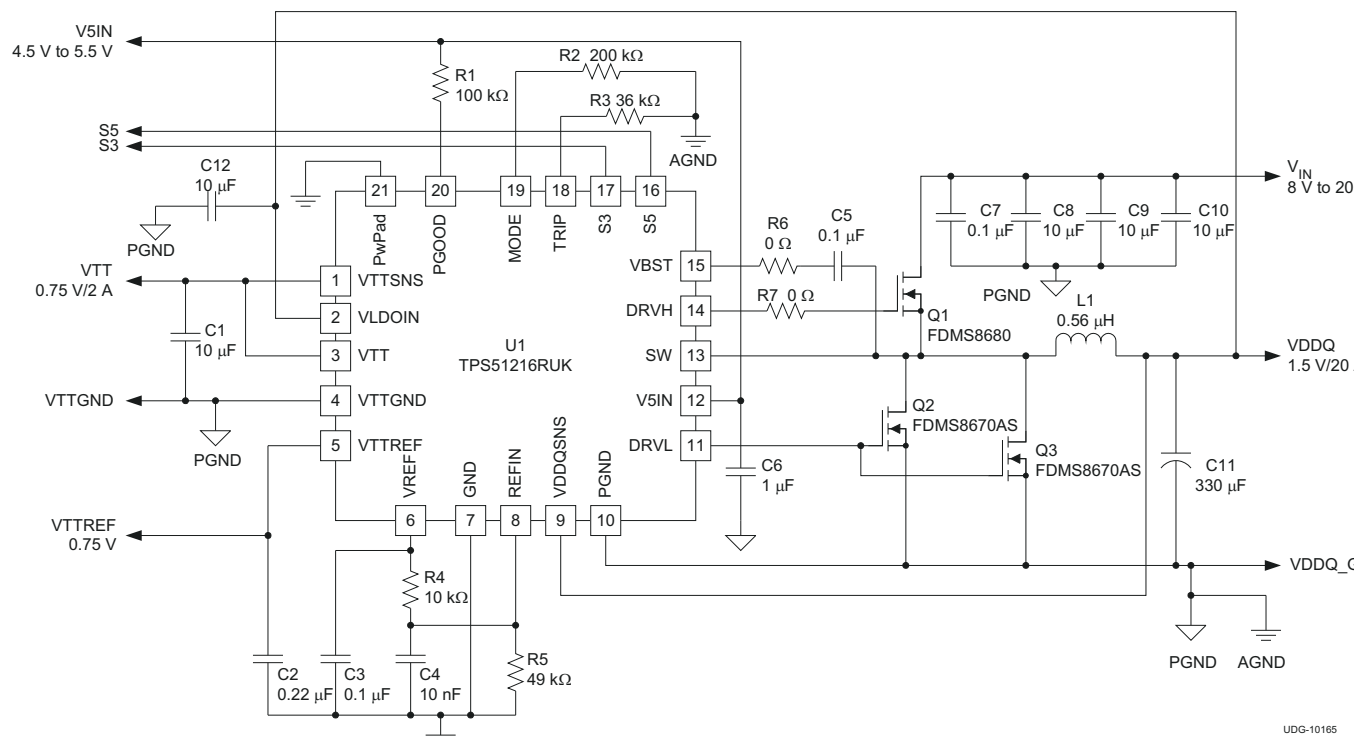


Figure 33. DDR3, 400-kHz Application Circuit, Tracking Discharge

Table 3. DDR3, 400-kHz Application Circuit, List of Materials

REFERENCE DESIGNATOR	QTY	SPECIFICATION	MANUFACTURE	PART NUMBER
C8, C9, C10	3	10 μF, 25 V	Taiyo Yuden	TMK325BJ106MM
C11	1	330 μF, 2V, 6 mΩ	Panasonic	EEFSX0D331XE
L1	1	0.56 μH, 21 A, 1.56 mΩ	Panasonic	ETQP4LR56WFC
Q1	1	30 V, 35 A, 8.5 mΩ	Fairchild	FDMS8680
Q2, Q3	2	30 V, 42 A, 3.5 mΩ	Fairchild	FDMS8670AS

For this example, the bulk output capacitor ESR requirement for D-CAP™ mode is described in Equation 12, whichever is greater.

$$ESR \geq \frac{20\text{mV} \times f_{\text{SW}} \times L}{V_{\text{OUT}}} \quad \text{or} \quad ESR \geq \frac{3}{2\pi \times f_{\text{SW}} \times C_{\text{OUT}}} \quad (12)$$