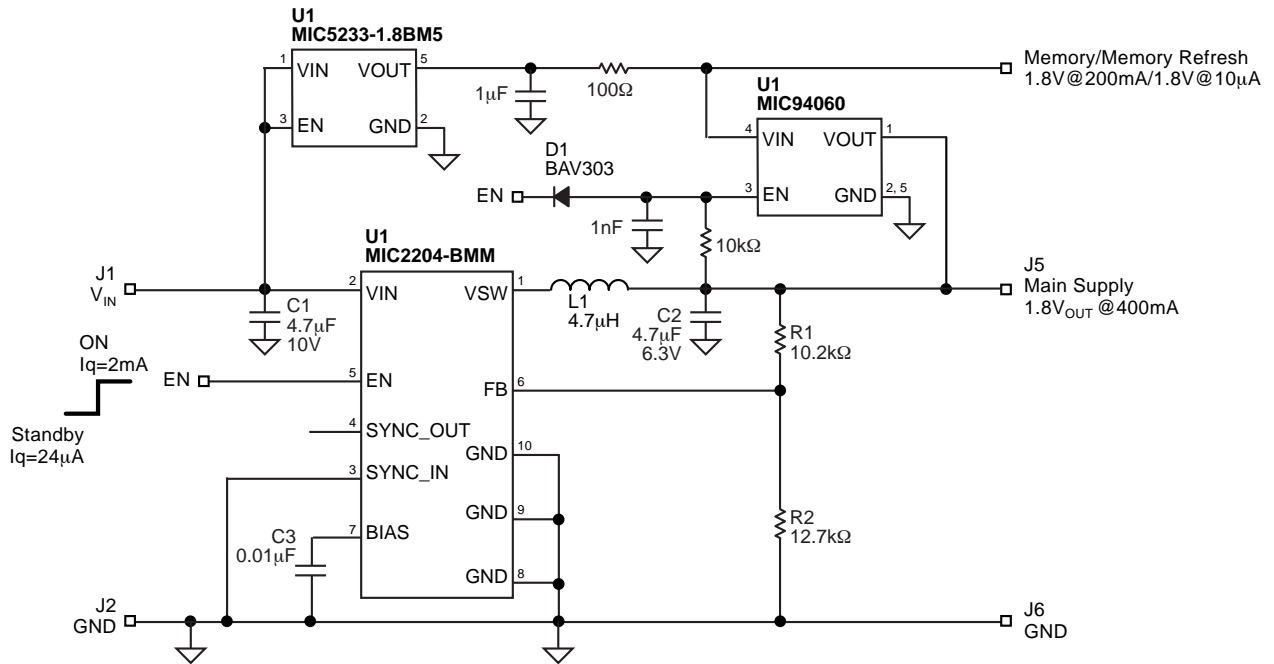


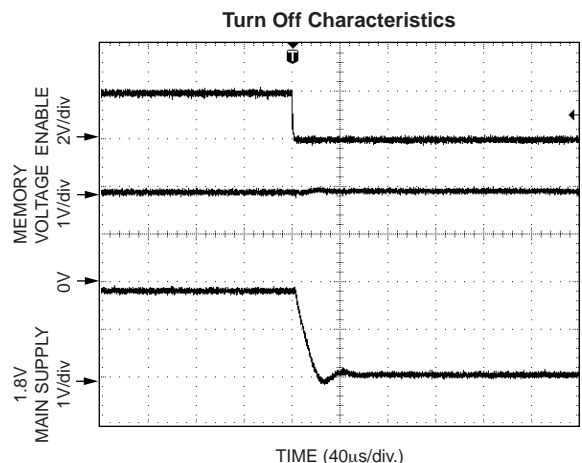
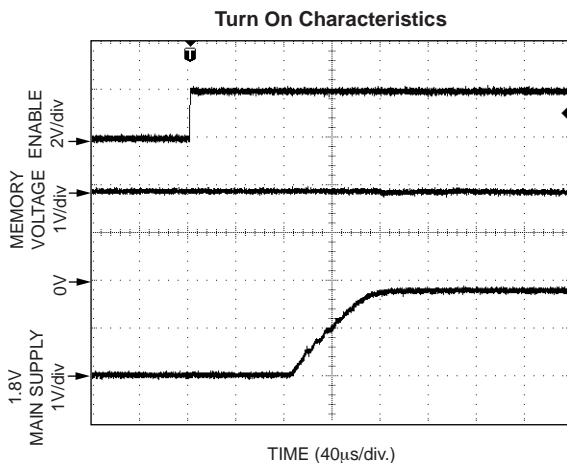
Description

The circuit provides a means to maintain minimal battery drain when placed into a standby mode while providing seamless switch over into high current mode. In the standby mode, the enable (EN) pin is pulled low. This disables the MIC2204 and the MIC94060. Power to the memory is provided only by the MIC5233 with very minimal current draw (around $28\mu\text{A}$ with a $10\mu\text{A}$ load). When enabled on, the

MIC2204 turns-on. The MIC94060 remains off for a time designated by the resistor and capacitor on the enable pin. This is to prevent the main supply load from momentarily dragging down the memory power. After the MIC94060 enable pin charges up, it turns-on providing a low resistance path for the MIC2204 to maintain both memory and main power.



Power Supply Circuit with Memory Refresh



Bill of Materials

Item	Part Number	Manufacturer	Description	Qty.
C1, C2	LMK212BJ475MG	Taiyo Yuden ⁽¹⁾	4.7 μ F/6.3V	2
C3	VJ0603Y103KMXX	Vitramon ⁽²⁾	0.01 μ F/25V	1
D1	BAV303	Vishay ⁽³⁾	250mA General Purpose Diode	1
L1	LQH32CN4R7M11	Murata ⁽⁴⁾	4.7 μ H	1
R1	CRCW06031022FRT1	Vishay ⁽³⁾	10.2k Ω , 1/16W, 1%, Size 0603	1
R2	CRCW06031272FRT1	Vishay ⁽¹⁾	12.7k Ω , 1/16W, 1%, Size 0603	1
U1	MIC2204BMM	Micrel, Inc. ⁽⁵⁾	High Efficiency 2MHz Synchronous Buck Converter	1
U2	MIC94060	Micrel, Inc. ⁽⁵⁾	100M Ω SC-70 Smart Load Switch	1
U3	MIC5233-1.8BM5	Micrel, Inc. ⁽⁵⁾	Low IQ μ Cap LDO Regulator	1

1. Taiyo Yuden: www.taiyo-yuden.com

2. Vitramon: www.vishay.com

3. Vishay: www.vishay.com

4. Murata: www.murata.com

5. **Micrel, Inc.:** www.micrel.com

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