

Circuit Performance

- Convert negative voltage to positive voltage
- Boost-Buck
- Low-profile solution

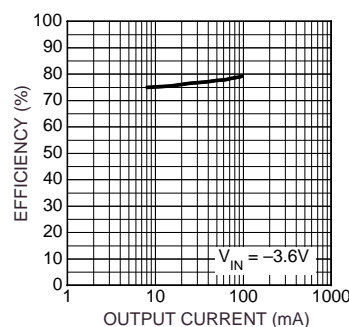
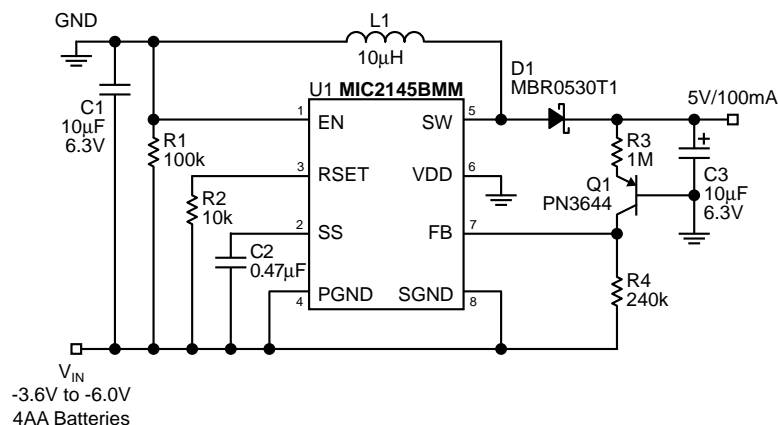


Figure 1. Typical 5V Output Efficiency

Bill of Materials

Item	Part Number	Manufacturer	Description	Qty.
U1	MIC2145BMM	Micrel ¹	High Efficiency Boost Converter	1
C1, C3	GRM42-6X5R106K6.3	Murata ²	10µF, 6.3V Ceramic	2
C2	GRM40X7R474K25	Murata ²	0.47µF, 25V Ceramic	1
D1	MBR0530T1	On Semiconductor ³	0.5A, 30V Schottky Rectifier	1
	MBRX0530	Micro Commercial Corp. ⁴	0.5A, 30V Schottky Rectifier	
L1	CR43-100	Sumida ⁵	10µH Inductor	1
Q1	PN3644	Fairchild	General Purpose PNP	1
R1	CRCW06031003FRT1	Vishay-Dale ⁶	100k, 1%, 0603 size resistor	1
R2	CRCW06031002FRT1	Vishay-Dale ⁶	10k, 1%, 0603 size resistor	1
R3	CRCW06031004FRT1	Vishay-Dale ⁶	1M, 1%, 0603 size resistor	1
R4	CRCW06032403FRT1	Vishay-Dale ⁶	240k, 1%, 0603 size resistor	1

1. Micrel Semiconductor tel: 408-944-0800
2. Murata tel: 949-916-4000
3. On Semiconductor tel: 800-344-3860
4. Micro Commercial Corp. tel: 800-346-3371
5. Sumida tel: 408-982-9660
6. Vishay-Dale tel: 402-644-4218

MICREL INC. 1849 FORTUNE DRIVE SAN JOSE, CA 95131 USA

TEL + 1 (408) 944-0800 FAX + 1 (408) 944-0970 WEB <http://www.micrel.com>

This information is believed to be accurate and reliable, however no responsibility is assumed by Micrel for its use nor for any infringement of patents or other rights of third parties resulting from its use. No license is granted by implication or otherwise under any patent or patent right of Micrel Inc.

© 2001 Micrel Incorporated