



## RCR2521SL

### ■ Electrical Characteristics ( $V_{IN} = 1.5V$ , $V_{DD}$ set to $3.3V$ , Load Current = $0$ , $T_a = 25^\circ C$ , unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Start-UP Voltage	$V_{ST}$	$I_L = 1mA$		0.98	1.05	V
Operating $V_{DD}$ Range	$V_{DD}$	$V_{DD}$ pin voltage	2		6	V
Shutdown Current I ( $V_{IN}$ )	$I_{OFF}$	EN Pin = $0V$ , $V_{IN} = 4.5V$		0.01	1	$\mu A$
Switch-off Current I ( $V_{DD}$ )	$I_{SWITCH OFF}$	$V_{IN} = 6V$	0.4	17	25	$\mu A$
Continuous Switching Current	$I_{SWITCH}$	$V_{IN} = EN = 3.3V$ , $V_{FB} = GND$		1	2	mA
No Load Current I ( $V_{IN}$ )	$I_{NO LOAD}$	$V_{IN} = 1.5V$ , $V_{OUT} = 3.3V$		75		$\mu A$
Feedback Reference Voltage	$V_{REF}$	Close Loop, $V_{DD} = 3.3V$	1.20	1.23	1.26	V
Switching Frequency	$F_S$	$V_{DD} = 3.3V$	425	500	575	KHz
Maximum Duty	$D_{MAX}$	$V_{DD} = 3.3V$	85	95		%
LX ON Resistance		$V_{DD} = 3.3V$	0.3	1.1	1.6	$\Omega$
Current Limit Setting	$I_{LIMIT}$	$V_{DD} = 3.3V$		2	2.6	A
EXT ON Resistance to $V_{DD}$		$V_{DD} = 3.3V$		11	15	$\Omega$
EXT OFF Resistance to GND		$V_{DD} = 3.3V$		11	15	$\Omega$
Line Regulation	$V_{LINE}$	$V_{IN} = 1.5 \sim 3V$ , $I_L = 1mA$		1.5	10	mV/V
Load Regulation	$V_{LOAD}$	$V_{IN} = 2.5V$ , $I_L = 1 \sim 100mA$		0.25		mV/mA
EN Pin Trip Level		$V_{DD} = 3.3V$	0.4	0.8	1.2	V
Temperature Stability for $V_{out}$	$T_S$			50		$P_{pm}/^\circ C$
Thermal Shutdown Hysterises	$T_{SD}$			10		$^\circ C$

### ■ Marking

Marking	RCR2521
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### ■ Typical Application Circuit

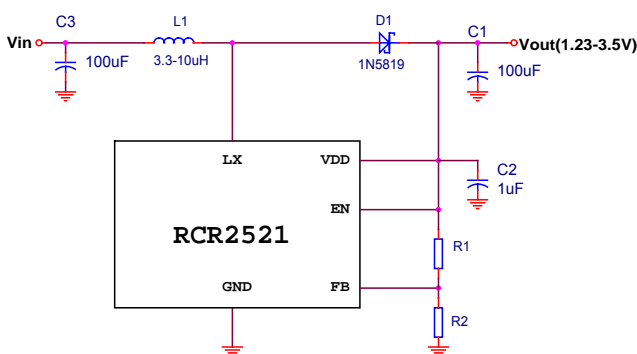


Figure 1. RCR2521 Typical Application for Portable Instruments

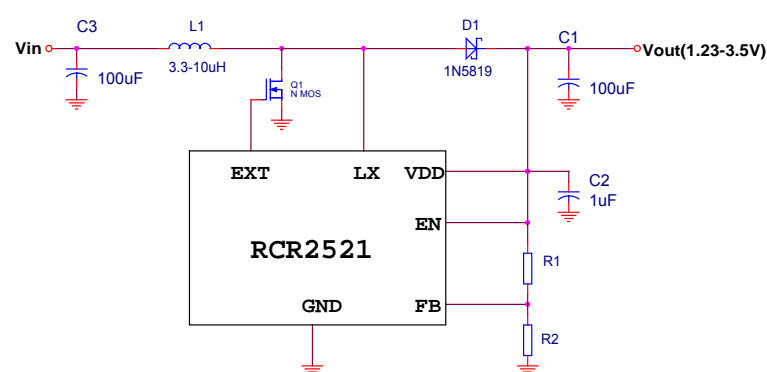
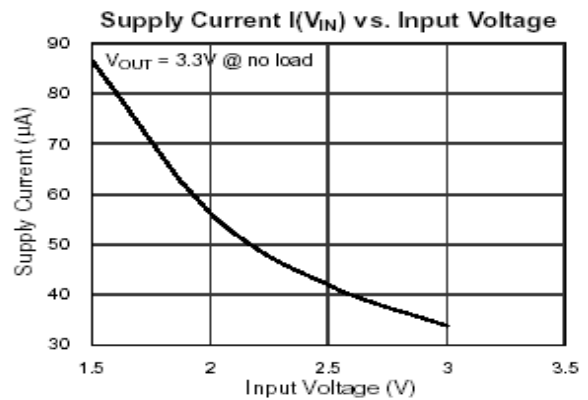
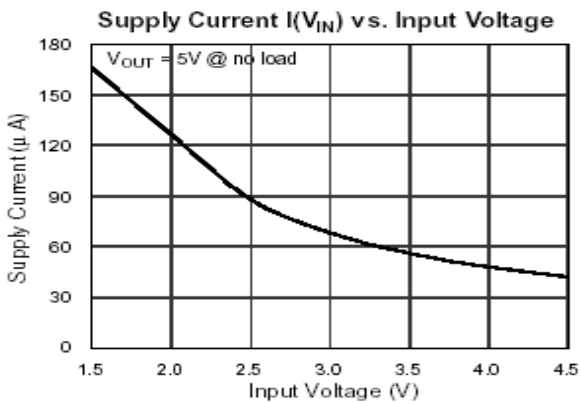
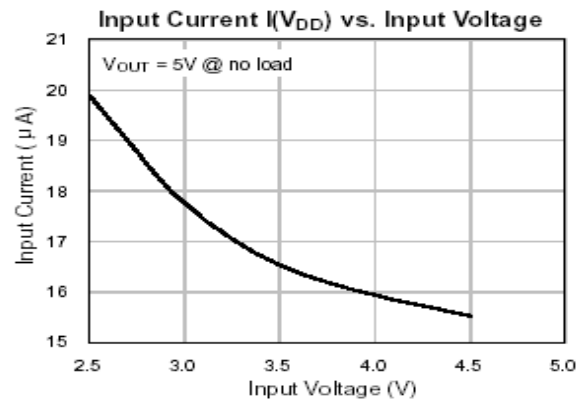
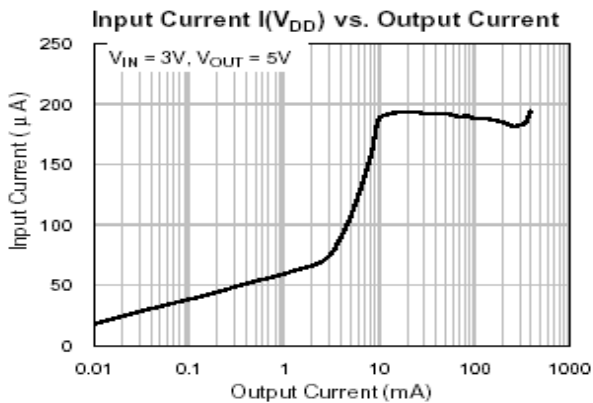
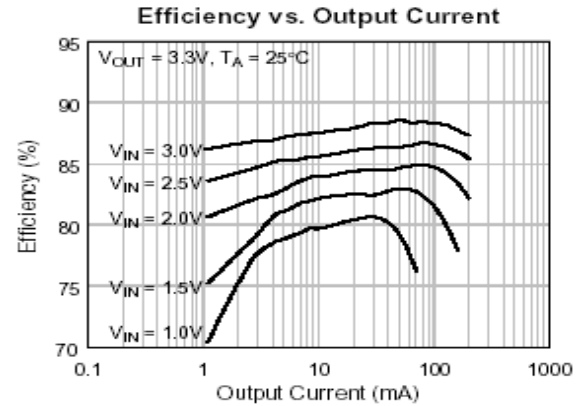
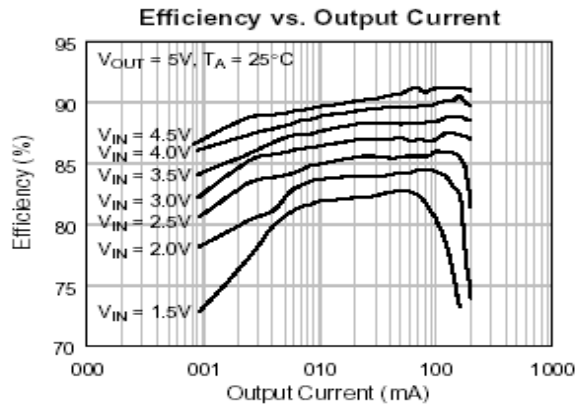


Figure 2. RCR2521 for Higher Current Applications

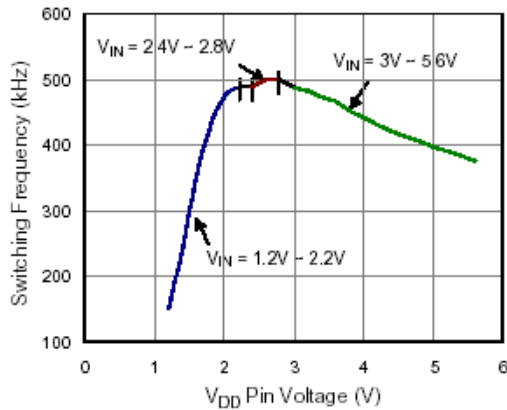
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## ■ Typical Characteristics

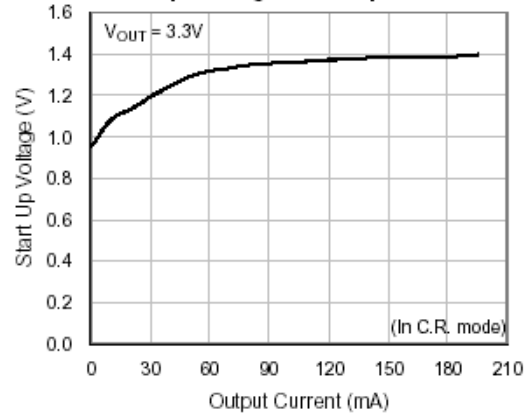


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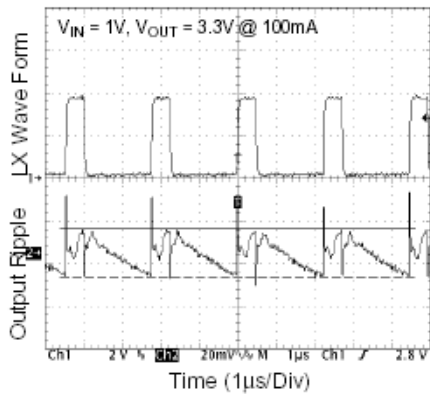
Switching Frequency vs.  $V_{DD}$  Pin Voltage



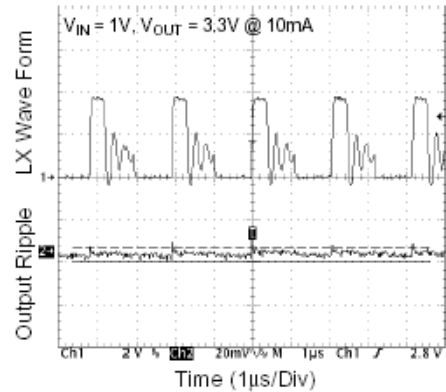
Start Up Voltage vs. Output Current



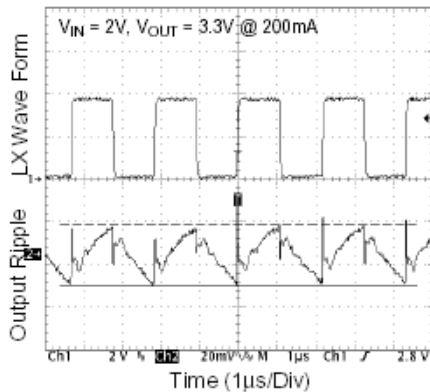
LX Pin Wave Form & Output Ripple



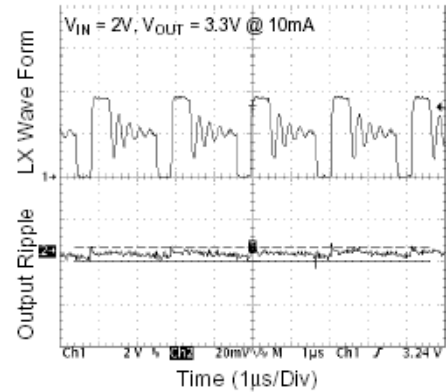
LX Pin Wave Form & Output Ripple



LX Pin Wave Form & Output Ripple

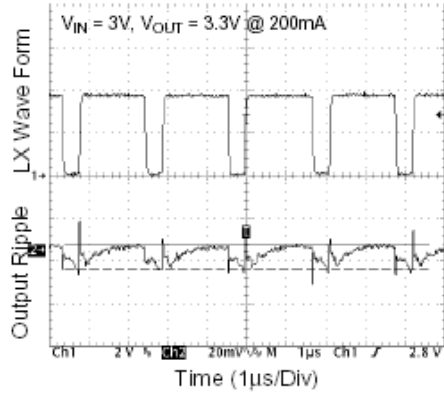


LX Pin Wave Form & Output Ripple

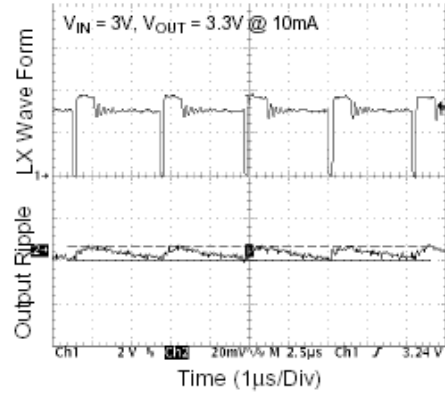


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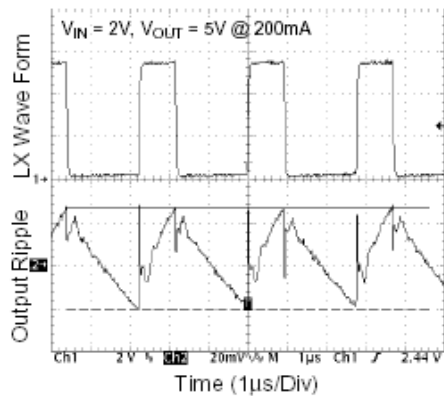
LX Pin Wave Form & Output Ripple



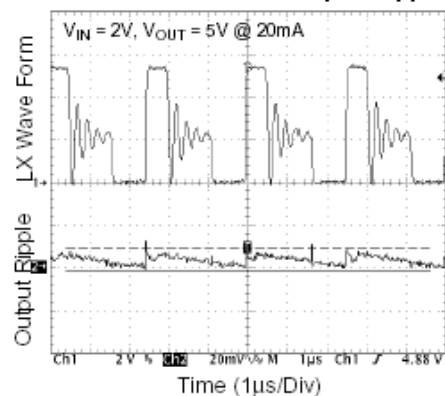
LX Pin Wave Form & Output Ripple



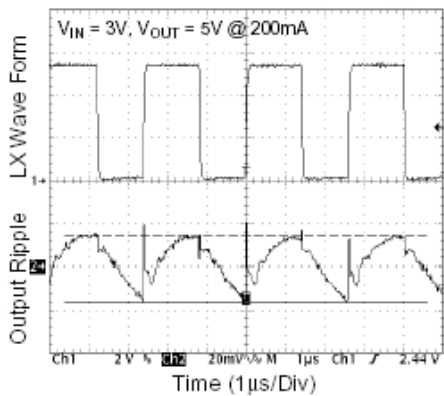
LX Pin Wave Form & Output Ripple



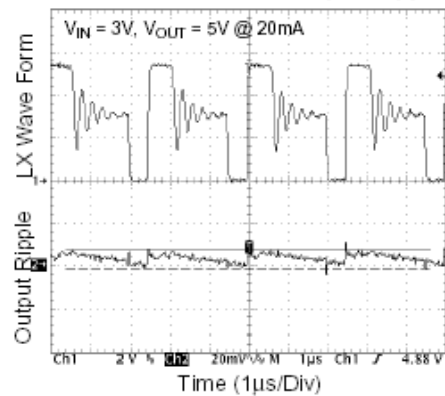
LX Pin Wave Form & Output Ripple



LX Pin Wave Form & Output Ripple



LX Pin Wave Form & Output Ripple



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