

## Product Brief

# High performance linear voltage regulator families for industrial and multimarket applications

Within modern electronic systems active components such as linear voltage regulators supplying power consuming devices need to contribute to a best overall energy efficiency. Beyond this other dedicated features such as low noise behavior, compact package form, maximum operating voltage, low dropout voltage or extraordinary robustness are key characteristics of voltage regulators to achieve highest system performance at little system and operational costs. Infineon's new **IFX1763**, **IFX54441**, **IFX30081** and **IFX54211** LDO families have been designed to exactly match those requirements.

### IFX1763 and IFX54441

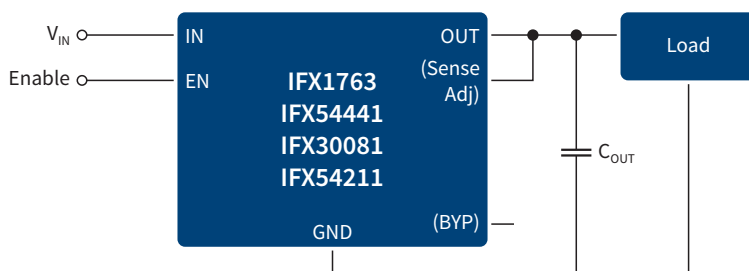
- > Supplying output currents of 500 mA at a dropout voltage of 320 mV or 300 mA respectively
- > Low output noise characteristics: typically down to 30  $\mu$ V<sub>RMS</sub> at output by adding an external 10 nF bypass capacitor
- > Reverse battery protection, current limiting and reverse current protection via built in internal protection circuitry

### IFX30081

- > Input voltage range of 2.75 V to 42 V and ultra low quiescent current of only 5  $\mu$ A (1  $\mu$ A with enable OFF)
- > Accuracy of 2 percent through max output current of 50 mA
- > Tiny 3.3 x 3.3 mm TSON-10 package

### IFX54211

- > Max output current of 150 mA, enable feature
- > High power supply rejection ratio (63 dB at 10 kHz) for post regulation purposes
- > Max power versus package ratio through tiny SCT595 package



### Key benefits

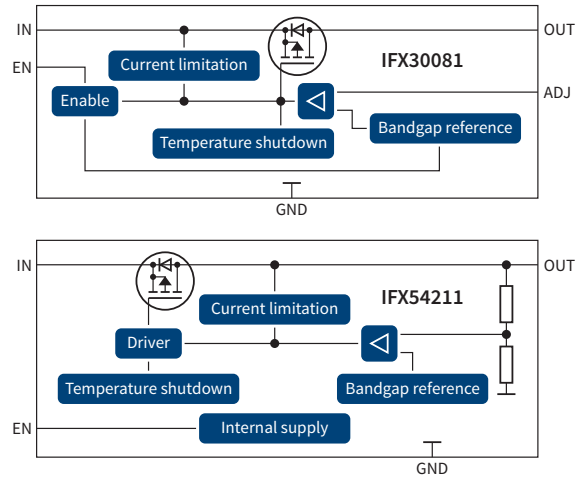
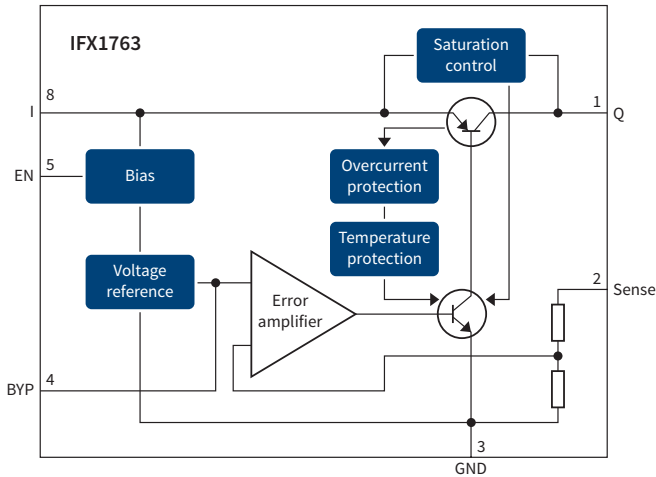
- > Battery power saving through ultra low quiescent currents and enable feature
- > Cost optimized ceramic capacitances applicable
- > System space saving through small packages
- > Excellent transient robustness reduces input filtering costs
- > Protection mechanisms avoid system damages

### Applications

- > Noise sensitive instrumentation, measuring equipment, PLL, VCO, LNA
- > ADC/DAC supply and sensor systems
- > Standby/keep alive supplies
- > Microcontroller e.g. Infineon XMC™ family supply
- > Battery operated systems, power tools
- > Industrial/automation systems and medical appliances
- > Post regulation to DC-DC switching converters

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## Block diagram



Demo board	Description	Order number
DEMOBD IFX30081SJ V	Evaluate the 50 mA, adjustable linear voltage regulator IFX30081 with ultra-low quiescent current in the DSO-8 package	DEMOBDIFX30081SJVTOBO1
DEMOBOARD IFX1763	The IFX1763 is a micro-power, low noise, low dropout voltage regulator. The device is capable of supplying an output current of 500 mA with a dropout voltage of 320 mV.	DEMOBOARDIFX1763TOBO1

Product	OPN	Output current [mA]	Output voltage [V]	Quiescent current [µA]	Dropout voltage [mV]	Max. input voltage (range) [V]	Package
IFX1763XEJ V	IFX1763XEJVXUMA1	500	Adj.	30	300	20	DSO-8 EP
IFX1763XEJ V33	IFX1763XEJV33XUMA1	500	3.3	30	300	20	DSO-8 EP
IFX1763XEJ V50	IFX1763XEJV50XUMA1	500	5.0	30	300	20	DSO-8 EP
IFX1763LD V	IFX1763LDVXUMA1	500	Adj.	30	300	20	TSON-10
IFX1763LD V33	IFX1763LDV33XUMA1	500	3.3	30	300	20	TSON-10
IFX1763LD V50	IFX1763LDV50XUMA1	500	5.0	30	300	20	TSON-10
IFX54441EJ V	IFX54441EJVXUMA1	300	Adj.	30	300	20	DSO-8 EP
IFX54441EJ V33	IFX54441EJV33XUMA1	300	3.3	30	300	20	DSO-8 EP
IFX54441EJ V50	IFX54441EJV50XUMA1	300	5.0	30	300	20	DSO-8 EP
IFX54441LD V	IFX54441LDVXUMA1	300	Adj.	30	300	20	TSON-10
IFX54441LD V33	IFX54441LDV33XUMA1	300	3.3	30	300	20	TSON-10
IFX54441LD V50	IFX54441LDV50XUMA1	300	5.0	30	300	20	TSON-10
IFX54211MB V33	IFX54211MBV33HTSA1	150	3.3	50	290	18	SCT595
IFX30081S V	IFX30081SJVXUMA1	50	Adj.	5	100	42	DSO-8
IFX30081LD V33	IFX30081LDV33XUMA1	50	3.3	5	100	42	TSON-10
IFX30081LD V	IFX30081SJVXUMA1	50	Adj.	5	100	42	TSON-10

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