

Toshiba Compact LDO regulators

Lineup of high-performance LDO-regulators from 150mA to 1500mA

Toshiba offers a wide variety of high-performance CMOS-based LDO regulators (identified by part numbers starting with TCR) in a variety of small packages with mixed feature sets focusing on noise, current consumption, and drop-out voltage.

• **Multifunctional, high-quality LDO regulators**

Modern applications require high-quality voltage regulation, power-saving, and safe operation. Therefore, a higher-performance power supply is essential. To meet these requirements, Toshiba's LDO regulator offers ultra-low drop-out, ultra-low current dissipation, high power supply rejection ratio (PSRR), ultra-high speed load transient response, and low inrush current.

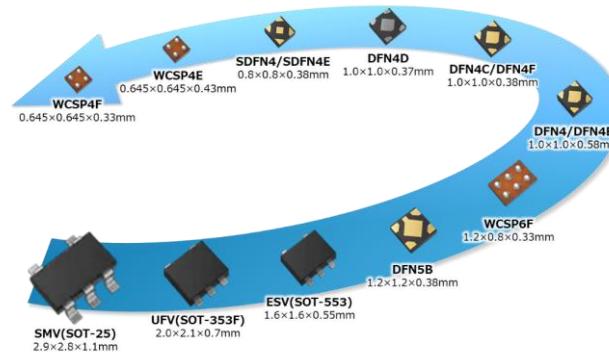
• **Wide range of output voltages and currents for various applications**

Output voltages are fixed and adjustable, providing a wide range of products with voltages from 0.55V to 5.0V. Output current ranges from a minimum of 150 mA to a maximum of 1500 mA. These devices are packaged in ultra-compact, high-thermal-dissipation WCSP types suitable for high-density mounting, along with industry-standard, easy to handle general-purpose lead types.

• **Delivery of high-quality, stable products at plants in Japan and Thailand**

Toshiba's LDO regulators are manufactured with high quality and efficiency at production facilities in Japan and Thailand, ensuring quick, stable and reliable supply for any design.

These regulators are well-suited for a wide range of applications, including noise-sensitive cameras, RF power supplies, MCU (CPU) power rails, and mobile devices that demand stringent power-saving performance. We invite you to explore their capabilities in your next design.



Characteristics / Package		VOUT	SOT-25 2.9 x 2.8mm t: 1.1mm	SOT-553 1.6 x 1.6mm t: 0.55mm	DFN5B 1.2 x 1.2mm t: 0.38mm	WCSP6F 1.2 x 0.8mm t: 0.33mm	DFN4 DFN4E 1.0 x 1.0mm t: 0.58mm	DFN4C DFN4F 1.0 x 1.0mm t: 0.38mm	DFN4D 1.0 x 1.0mm t: 0.37mm	SDFN4 SDFN4E 0.8 x 0.8mm t: 0.38mm	WCSP4E 0.645 x 0.645mm t: 0.43mm	WCSP4F 0.645 x 0.645mm t: 0.33mm
150mA	High voltage ($\leq 36V$) Low I_q	1.8V to 5.0V	TCR1HF series									
200mA	Low I_q	0.8V to 3.6V	TCR2LF series	TCR2LE series						TCR2LN series		
	Low noise High speed transient	1.0V to 5.0V	TCR2EF series	TCR2EE series						TCR2EN series		
300mA	Low I_q	0.8V to 5.0V								TCR3LM series		
	Ultra-Low I_q Bypass mode	0.8V to 5.0V	TCR3UF series				TCR3UM series					TCR3UG series
	Low dropout Wide range input voltage	0.8V to 5.0V								TCR3EM series		
	Low dropout High-speed transient	1.0V to 4.5V	TCR3DF series							TCR3DMxxA series		TCR3DG series
	Ultra-low noise High-ripple rejection	0.9V to 4.5V						TCR3RM series				
420mA	Low dropout High-speed transient	1.0V to 4.5V									TCR4DG series	
500mA	Bias Rail Type (Nch) Ultra-low dropout High-ripple rejection	0.8V to 3.6V			TCR5BM series							
	High-speed transient Ultra-low noise High-ripple rejection	0.9V to 5.0V							TCR5FM series			TCR5RG series
800mA	Bias-rail Type (Nch) Ultra-low dropout High-ripple rejection	0.8V to 3.6V			TCR8BM series							
1300mA	Bias-rail Type (Nch) Ultra-low dropout High-speed transient High-ripple rejection	Adjustable 0.55V to 3.6V				TCR13AGADJ						
1500mA	Bias-rail Type (Nch) Ultra-low dropout High-speed transient High-ripple rejection	Adjustable 0.65V to 3.6V Fixed 0.6V to 3.6V				TCR15AG series						

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