

## Introduction of Toshiba compact LDO regulators

Lineup of high-performance LDO-regulators from 200mA to 1500mA!

Toshiba's TCR-series are small packaged CMOS LDO regulator ICs. These devices are high-performance LDOs in small packages and are a very popular series of products.

### • Multifunctional, high-quality LDO regulators

In recent years, various applications require high-quality, 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 ripple (PSRR) rejection rate, ultra-high speed load transient response, and low rush current. Toshiba's LDO regulator offers an inexpensive linear regulator compared to switching regulators, and offers high-performance power supply solutions.

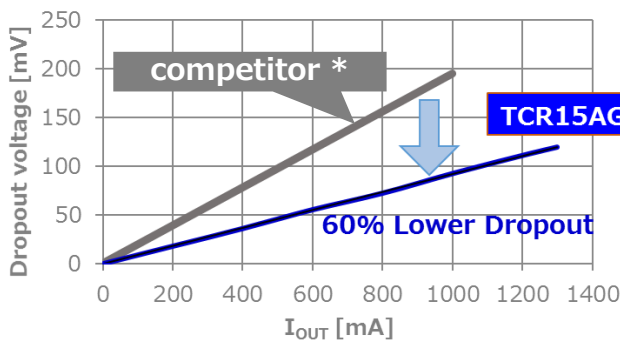
### • Packages that are easy to use anywhere with a wide output voltage and current

Output voltages are fixed and variable, providing a wide range of products ranging from 0.55V to 5.0V. The output current range ranges from a minimum of 200 mA to a maximum of 1500 mA. The packaging offers a wide range of ultra-compact, high-tolerable-loss WCSP types suitable for high-density packaging and low-handling general-purpose lead types.

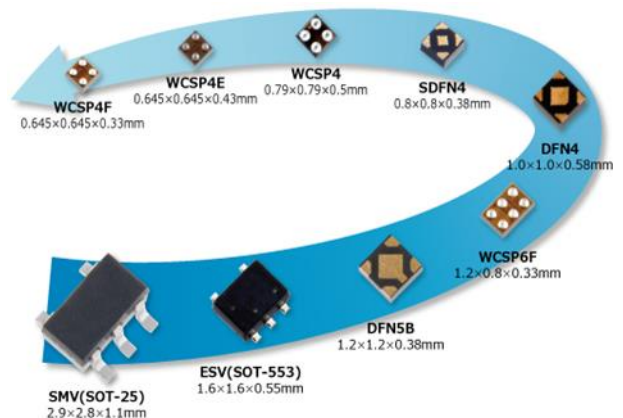
### • Delivery of high-quality, stable products at plants in Japan and Thailand











Toshiba's LDO regulators can be delivered stable through high-quality and stable production at plants in Japan and Thailand. We will respond sincerely and promptly to rapid delivery troubles.

Toshiba's LDO regulators are suitable for such as noise-sensitive cameras, RF power supplies, MCU (CPU) power supplies, mobile device power supplies with strong powersaving demanding LDO applications. Please try it once.



\*Compared to same kind products based on our survey as of today.



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 1.2mm t: 0.33mm 	DFN4E 1.0 x 1.0mm t: 0.58mm 	DFN4F 1.0 x 1.0mm T: 0.38mm 	SDFN4E 0.8 x 0.8mm t: 0.38mm 	WCSP4 0.79 x 0.79mm t: 0.5mm 	WCSP4E 0.645 x 0.645mm t: 0.43mm 	WCSP4F 0.645 x 0.645mm t: 0.33mm 
<b>200mA</b>	Ultra-Low Iq (<2μA)	0.8V to 3.6V	<a href="#">TCR2LF**</a>	<a href="#">TCR2LE**</a>					<a href="#">TCR2LN*</a> *			
	Low noise High speed transient	1.0V to 5.0V	<a href="#">TCR2EF*</a> *	<a href="#">TCR2EE*</a> *					<a href="#">TCR2EN*</a> *			
<b>300mA</b>	Ultra-Low Iq (<1μA) Bypass mode	0.8V to 5.0V	<a href="#">TCR3U**</a>				<a href="#">TCR3UM*</a> *					<a href="#">TCR3UG**</a>
	Low dropout High-speed transient Reduced inrush current	1.0V to 4.5V	<a href="#">TCR3DF*</a> *				<a href="#">TCR3DM*</a> *				<a href="#">TCR3DG*</a> *	
	Ultra-low noise High-ripple rejection	0.9V to 4.5V						<a href="#">TCR3RM*</a> *				
<b>420mA</b>	Low dropout High-speed transient Reduced inrush current	1.0V to 4.5V									<a href="#">TCR4DG*</a> *	
<b>500mA</b>	Bias Rail Type (Nch) Ultra-low dropout High-ripple rejection	0.8V to 3.6V			<a href="#">TCR5BM*</a> *							
	Ultra-low noise High-ripple rejection	0.9V to 5.0V										<a href="#">TCR5RG**</a>
<b>800mA</b>	Bias-rail Type (Nch) Ultra-low dropout High-ripple rejection	0.8V to 3.6V			<a href="#">TCR8BM*</a> *							
<b>1300mA</b>	Bias-rail Type (Nch) Ultra-low dropout High-speed transient High-ripple rejection	Adjustable 0.55 to 3.6V				<a href="#">TCR13AG**</a>						
<b>1500mA</b>	Bias-rail Type (Nch) Ultra-low dropout High-speed transient High-ripple rejection	Adjustable 0.65 to 3.6V Fixed 0.6 to 3.6V				<a href="#">TCR15AG**</a>						

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