TOSHIBA

LINEAR VOLTAGE REGULATOR

Low Voltage Drop-Out Regulator



Ultra Low Drop-Out & High Power Supply Rejection Ratio

Power supply stabilization is key for any kind of IC, sensor, module or camera, because sudden load changes and noise can influence the performance of a device. Beyond stable operation, efficiency is very important for power saving and thermal management. A low quiescent current improves long life operation of battery powered systems. Auto discharge, soft-start function over-current protection, inrush current limitation and thermal shutdown are further features to enable an intelligent power supply operation.

Applications

- Sensor-based systems
- IoT chipset
- Bluetooth modules
- RF systems
- Camera module
- Modem
- NAND controller

Features

- High Power Supply Rejection Ratio (PSRR) value
- Ultra low drop-out voltage
- Low inrush current
- Fast load transient response
- Low quiescent current
- Wide package range

Advantages

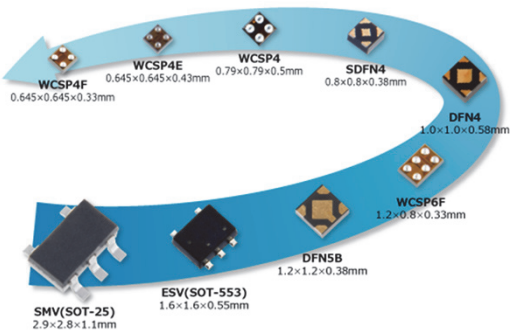
- High level noise suppression over wide frequency
- Low power loss
- Improved power supply stabilization
- Noise prevention
- Very stable output voltage
- Meets the requirements of various applications
- Reduced height and volume constrains

Benefits

- Remove noise from power line
- Very high efficiency
- Smart operation
- Stable operation even at sudden load change
- Long battery life operation

Overview of package size

The package options for Toshiba`s LDO range from smallest 0.42mm^2 WCSP4F package up to the largest SOT-25. Best thermal performance is achieved using WSCP6F package which requires less than 1mm^2 area. Due to low heights of WCSP and DFN packages, these LDO are particularly suitable for application which require very flat types.



Ultra low drop-out and more

Toshiba's LDO series does not only provide the highest efficiency. It also gives you additional features like high ripple rejection, fast load transient response time or low quiescent current to achieve best system performance.

Product lineup for low drop-out regulators

Low drop-out voltage regulators

Series	Output type	Output current	Output voltage	Package	Low drop-out voltage	High ripple rejection	Low inrush current	Fast load transient response	Over-current protection	Thermal shutdown	Auto-discharge
TCR15AGADJ	Adjustable	1.5A	0.6 - 3.6 V	WCSP6F	•	•	•	•	•	•	•
TCR15AG	Fixed	1.5A	0.65 - 3.6 V	WCSP6F	•	•	•	•	•	•	•
TCR13AGADJ	Adjustable	1.3A	0.55 - 3.6 V	WCSP6F	•	•	•	•	•	•	•
TCR3DM	Fixed	0.3A	1.0 - 4.5 V	DFN4	•		•		•	•	•
TCR3DG	Fixed	0.3A	1.0 - 4.5 V	WCSP4E	•		•		•	•	•
TCR3DF	Fixed	0.3A	1.0 - 4.5 V	SMV(SOT-25)	•		•		•	•	•
TCR4DG	Fixed	0.42A	1.0 - 4.5 V	WCSP4E	•		•		•	•	•
TCR5AM	Fixed	0.5A	0.55 - 3.6 V	DFN5B	•	•	•	•	•	•	•
NEW TCR5BM*	Fixed	0.5A	0.8 - 3.6 V	DFN5B	•	•	•	•	•	•	•
NEW TCR8BM*	Fixed	0.8A	0.8 - 3.6 V	DFN5B	•	•	•	•	•	•	•

Fast load transient response LDO regulators

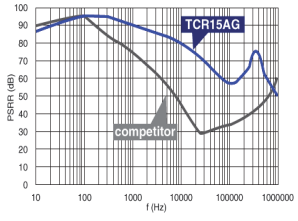
Series	Output type	Output current	Output voltage	Package	Low drop-out voltage	High ripple rejection	Low quiescent current	Fast load transient response	Over-current protection	Thermal shutdown	Auto-discharge
TCR15AGADJ	Adjustable	1.5A	0.6 to 3.6 V	WCSP6F	•	•		•	•	•	•
TCR15AG	Fixed	1.5A	0.65 to 3.6 V	WCSP6F	•	•		•	•	•	•
TCR13AGADJ	Adjustable	1.3A	0.55 to 3.6 V	WCSP6F	•	•		•	•	•	•
TCR3UG	Fixed	0.3A	0.8 to 5.0 V	WCSP4F			•	•	•	•	•
NEW TCR3UF	Fixed	0.3A	0.8 to 5.0 V	SMV(SOT-25)			•	•	•	•	•
TCR3UM	Fixed	0.3A	0.8 to 5.0 V	DFN4			•	•	•	•	•
TCR5AM	Fixed	0.5A	0.55 to 3.6 V	DFN5B	•	•		•	•	•	•
NEW TCR5BM*	Fixed	0.5A	0.8 to 3.6 V	DFN5B	•	•		•	•	•	•
NEW TCR8BM*	Fixed	0.8A	0.8 to 3.6 V	DFN5B	•	•		•	•	•	•

High ripple rejection regulators

Series	Output type	Output current	Output voltage	Package	Low drop-out voltage	High ripple rejection	Fast load transient response	Over-current protection	Thermal shutdown	Auto-discharge	Others
TCR15AGADJ	Adjustable	1.5A	0.6 to 3.6 V	WCSP6F	•	•	•	•	•	•	
TCR15AG	Fixed	1.5A	0.65 to 3.6 V	WCSP6F	•	•	•	•	•	•	
TCR13AGADJ	Adjustable	1.3A	0.55 to 3.6 V	WCSP6F	•	•	•	•	•	•	
TCR2DG	Fixed	0.2A	1.2 to 3.6 V	WCSP4		•		•	•		Low noise
TCR5AM	Fixed	0.5A	0.55 to 3.6 V	DFN5B	•	•	•	•	•	•	
NEW TCR5BM*	Fixed	0.5A	0.8 to 3.6 V	DFN5B	•	•	•	•	•	•	
NEW TCR8BM*	Fixed	0.8A	0.8 to 3.6 V	DFN5B	•	•	•	•	•	•	

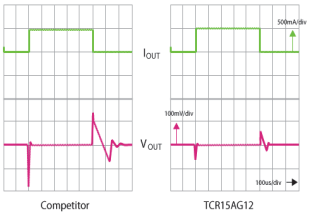
* New product

Remove noise from power line



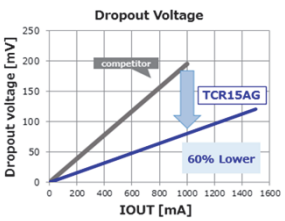
Remove input noise by high PSRR advanced technology.

High output stability at load change



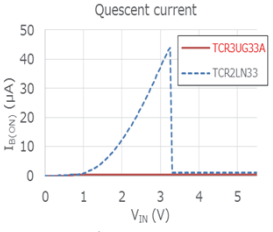
Keeping voltage output stable when load current sudden change.

Low power loss by low dropout



Low input voltage is acceptable by low dropout.

Long battery life operation by low quiescent current



Keeping low IQ by bypass mode.

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Üreticileri görün

Toplu alım ve teklif

Listede olmayan ya da yüksek adetli parçalar için teklif isteyin.

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