

Introduction of Semi-power & small-size low RON MOSFET

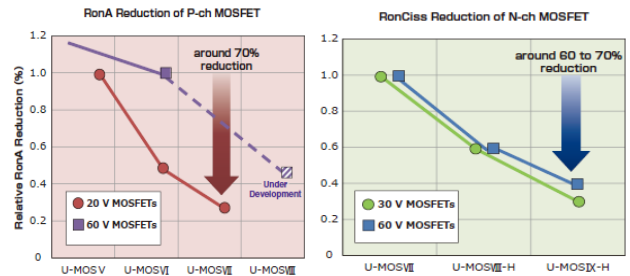
Expanding lineup of semi-power and small-size MOSFET with industry-leading low RON

Toshiba uses cutting-edge technology to achieve industry-leading low RON characteristics, and packages are available in industry standard 2x2 mm and 2.9x2.8 mm sizes.

It contributes to the low power consumption and downsizing required for battery-powered devices such as smartphones and wearable devices.

The industry's top class low RON characteristic contributes to reduce the burden on the heat dissipation design.

Toshiba uses advanced trench process technology to miniaturize its cell structure to achieve industry-leading low RON characteristic. The latest-generation trench processes Pch7 and Nch9 succeeded in reducing the on-resistance per unit area by up to 70 % compared to the old-generation processes. It is effective in reducing conduction loss.



Contributing to energy savings in low loss load switch applications

Low loss and compact semiconductor devices are essential in order to reduce power consumption of power supply system such as rapid charge and USB PD as typified by mobile devices and power supply systems in the sets themselves. SSM6K513NU, a MOSFET using Toshiba's advanced technologies, achieves excellent low on-resistance characteristic and reduces the temperature rise due to conduction losses by 27 % compared to other companies in actual machine tests assuming supply current of 5 A.

Features

- Low on-resistance: 12 ~ 105 mΩ @4.5 V
- Wide voltage rating Lineup: VDSS = -20 ~ 100 V

• MOSFET selection table

[N-Channel MOSFETs]

Part number	Product summary	Package	VDSS (V)	VGSS (V)	ID (A)	RON max (mΩ)		Ciss (pF)	Buy Online
						1.8V	4.5V		
SSM6K513NU	MOSFET N-CH 30V/15A UDFN6B	UDFN6B (2.0x2.0mm)	30	±20	15	-	12	1130	Buy Online
SSM6K514NU	MOSFET N-CH 40V/12A UDFN6B	UDFN6B (2.0x2.0mm)	40	±20	12	-	17.3	1110	Buy Online
SSM6K341NU	MOSFET N-CH 60V/6A UDFN6B	UDFN6B (2.0x2.0mm)	60	±20	6	-	51	550	Buy Online
SSM6K361NU	MOSFET N-CH 100V/3.5A UDFN6B	UDFN6B (2.0x2.0mm)	100	±20	3.5	-	92	430	Buy Online
SSM6K517NU	MOSFET N-CH 30V/6A UDFN6B	UDFN6B (2.0x2.0mm)	30	+12/-8	6	82	39	310	Buy Online
SSM6K518NU	MOSFET N-CH 20V/6A UDFN6B	UDFN6B (2.0x2.0mm)	20	+8/-6	6	74	33	410	Buy Online
SSM6N67NU	MOSFET 2N-CH 30V/4A UDFN6	UDFN6 (2.0x2.0mm)	30	+12/-8	4	-	39.1	310	Buy Online
SSM3K333R	MOSFET N-CH 30V/6A SOT-23F	SOT-23F (2.9x2.4mm)	30	±20	6	-	42	436	Buy Online
SSM3K345R	MOSFET N-CH 20V/4A SOT-23F	SOT-23F (2.9x2.4mm)	20	8	4	74	33	410	Buy Online

[P-Channel MOSFETs]

Part number	Product summary	Package	VDSS (V)	VGSS (V)	ID (A)	RON max (mΩ)		Ciss (pF)	Buy Online
						1.5V	4.5V		
SSM6J511NU	MOSFET P-CH 12V/14A UDFN6B	UDFN6B (2.0x2.0mm)	-12	±10	-14	-	10	3350	Buy Online
SSM6J507NU	MOSFET P-CH 30V/10A UDFN6B	UDFN6B (2.0x2.0mm)	-30	+20/-25	-10	-	28	1150	Buy Online
SSM6P69NU	MOSFET 2P-CH 20V/4A UDFN6	UDFN6 (2.0x2.0mm)	-20	+6/-12	-4	-	56	480	Buy Online
SSM3J374R	MOSFET P-CH 30V/4A SOT-23F	SOT-23F (2.9x2.4mm)	-30	+10/-20	-4	-	105	1400	Buy Online
SSM3J378R	MOSFET P-CH 20V/6A SOT-23F	SOT-23F (2.9x2.4mm)	-20	+6/-8	-6	88.4	29.8	560	Buy Online



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