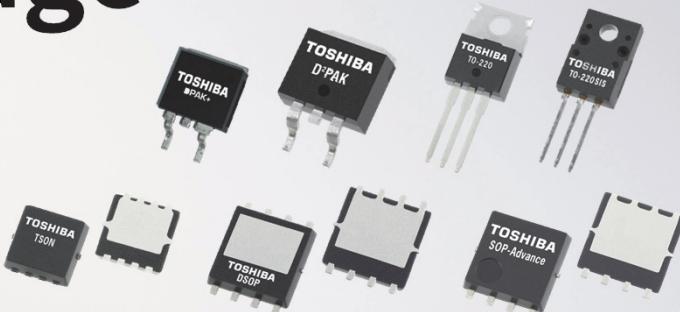


Low Voltage MOSFETs



Highest Efficiency at Light Loads

U-MOS VIII-H and IX are high-efficiency Low Voltage (LV) MOSFET series, specifically designed for use in the secondary side of AC-DC power supplies for adapters, servers etc. as well as DC-DC power supplies for communication equipment, servers and data center. U-MOS IX is also suitable for motor drives, UPS and machine tools. The U-MOS VIII-H and IX series provide higher efficiency at light loads while providing the same efficiency as competitors' devices at heavy loads. U-MOS IX and X item are specified up to 175°C for use in higher temperature applications.

Applications

- Power supplies
- Industry automation
- Servers
- Adapters
- UPS
- Machine tools
- Battery packs
- Welding

Benefits

- Attractive cost effects
- Lower system costs due to fast switching & smaller form factor
- Low service costs based on increased lifetime (cooler system) to reduce costs of operation failures
- Flexible system costs by cost variations related to product construction (topology)
- Smart performance increases
- Improved end product quality
- Improved end product reliability
- Increased demand and market share

Features

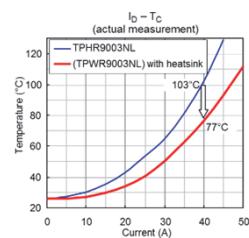
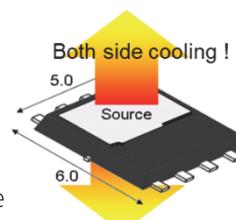
- Latest Gen-10 and Gen-9 trench MOS process, complementing Gen-8 lineup
- Increased T_j :175°C since Gen-9
- Improved energy efficiency categories
- Highest performance in on-resistance per die area ($R_{ON,A}$)
- Wide range of V_{DSS} (30V-250V) and $R_{DS(ON)}$ values down to 0.6mΩ
- Package option dual side cooling
- Low spike solutions since Gen-9

Advantages

- Wide product lineup is applicable in various power apps.
- More thermal safety head room
- Significantly better trade-offs between on-resistance ($R_{DS(ON)}$) and charge characteristics.
- High avalanche ruggedness
- Reduced electromagnetic radiation
- Ideal for applications that require power density, smaller size etc.
- Less EMI effects at low spike type

Dual side cooling

The new DSOP dual-side cooling package can use the same footprint as the 5x6mm SOP-Advanced. Due to the strongly reduced thermal resistance, the maximum load can be increased considerably. Alternatively the MOSFET temperature can be reduced to increase long term reliability.



V_{DSS} (V)	$R_{DS(ON)}$ In mΩ	TO-220SIS	TO-220	D2-PAK (TO-263)	SOP Advance 5x6mm	DSOP Advance 5x6mm	TSon Advance 3x3mm	DPAK
								
30	10-20				TPH11003NL		TPN11003NL	
	5-10				TPH8R903NL TPH6R003NL		TPN8R903NL TPN6R003NL TPN6R303NC TPN5R203PL**	
	3-5				TPH4R003NL TPH3R203NL		TPN4R203NC TPN4R303NL	
	1-3				TPH3R003PL** TPH2R903PL** TPH2R003PL** TPH1R403NL		TPN2R203NC TPN2R503NC TPN2R703NL TPN2R903PL**	
	<1				TPHR9003NL TPHR9203PL** TPHR6503PL**	TPWR8503NL TPWR6003PL**	TPN1R603PL**	
40	5-10				TPH7R204PL** TPH6R004PL**		TPN7R504PL**	
	3-5	TK3R1A04PL**	TK3R1E04PL**		TPH3R704PL**		TPN3R704PL**	TK3R1P04PL**
	<3				TK1R5R04PB** TK1R4F04PB**	TPH2R104PL** TPH1R204PB** TPH1R204PL**		TPN2R304PL**
	<1				TKR74F04PB**	TPHR8504PL**	TPW8004PL**	
60	10-30	TK30A06N1 TK40A06N1	TK30E06N1 TK40E06N1		TPH14006NH TPH11006NL		TPN22006NH TPN14006NH TPN11006PL**	
	6-10	TK58A06N1 TK8R2A06PL**	TK58E06N1 TK8R2E06PL**		TPH9R506PL** TPH7R506NH TPH7R006PL**		TPN7R506NH TPN7R006PL**	TK6R7P06PL**
	3-6	TK5R3A06PL** TK4R3A06PL**	TK5R1E06PL** TK4R3E06PL**		TPH5R906NH TPH3R506PL**		TPN4R806PL**	TK4R4P06PL**
	1-3	TK100A06N1 TK3R3A06PL**	TK100E06N1		TPH2R306NH TPH2R506PL** TPH1R306PL** TPH1R306P1**	TPW1R306PL**		
75	1-3				TPH2R608NH	TPW2R508NH		
80	30-50						TPN30008NH	
	10-20	TK35A08N1	TK35E08N1		TPH12008NH		TPN19008QM***	TPN13008NH NEW
	5-10	TK46A08N1	TK46E08N1		TPH8R008NH			
	2-5	TK72A08N1 TK100A08N1	TK72E08N1 TK100E08N1		TPH4R008NH TPH2R408QM***	TPW4R008NH		
100	30-50						TPN3300ANH	
	10-30	TK22A10N1 TK110A10PL	TK22E10N1 TK110E10PL		TPH1400ANH		TPN1600ANH TPN1200APL**	TK110P10PL**
	5-10	TK34A10N1 TK40A10N1 TK7R4A10PL TK6R7A10PL	TK34E10N1 TK40E10N1 TK7R2E10PL TK6R4E10PL	TK60R10N1L	TPH8R80ANH TPH6R30ANL			TK7R7P10PL**
	3-5	TK65A10N1 TK4R1A10PL TK100A10N1 TK3R2A10PL	TK65E10N1 TK3R9E10PL TK100E10N1	TK65G10N1	TPH5R60APL** TPH4R50ANH TPH4R10ANL TPH3R70APL**	TPW4R50ANH TPW3R70APL**		
	<3		TK2R9E10PL	TK160F10N1L*				
	10-20	TK32A12N1	TK32E12N1					
120	5-10	TK42A12N1	TK42E12N1					
	3-5	TK56A12N1	TK56E12N1					
	10-20	TK72A12N1	TK72E12N1					
150	50-100				TPH5900CNH		TPN5900CNH	
	20-50				TPH3300CNH			
	10-20				TPH1500CNH	TPW1500CNH		
200	100-200				TPH1110ENH		TPN1110ENH	
	50-100				TPH6400ENH			
	20-50				TPH2900ENH	TPW2900ENH		
250	200-300				TPH2010FNH		TPN2010FNH	
	100-200				TPH1110FNH			
	50-100				TPH5200FNH	TPW5200FNH		

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Product specifications are all subject to change without notice. Product design specifications and colours are subject to change without notice and may vary from those shown. Errors and omissions excepted.

* TO-220SM(W) package; ** U-MOS IX technology; *** U-MOS X technology

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