

PerFET™

60V POWER MOSFET

Taiwan Semiconductor introduces its PerFET™ 60V MOSFET technology in PDFN56U (5mm × 6mm) single and dual packages for high-power-density automotive applications. The portfolio includes 12 devices with normal-level (10V) and logic-level (5V) gate drive options, delivering optimized $R_{DS(on)} \times Q_g$ performance.

Built on advanced 60V Shielded Gate Trench (SGT) technology, PerFET™ MOSFETs combine low $R_{DS(on)}$, low gate charge, and fast switching for efficient DC/DC converters, motor drives, pumps, fans, and other high-current automotive loads.

The PDFN56U wettable flank package enables reliable solder joint inspection and improved AOI capability in an industry-standard 5mm × 6mm footprint.



Official Website



X

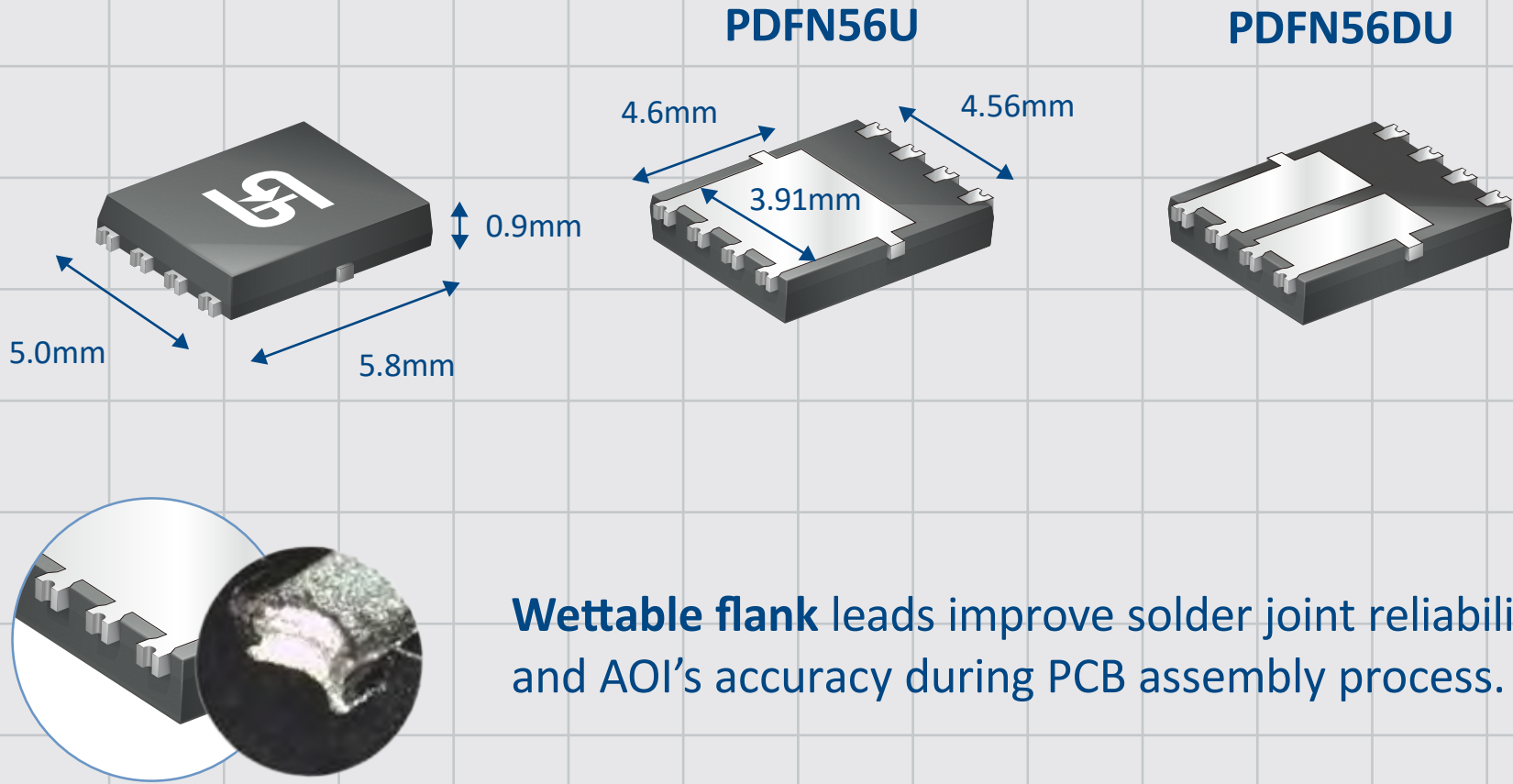


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PACKAGE



Wettable flank leads improve solder joint reliability and AOI's accuracy during PCB assembly process.

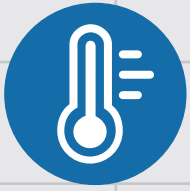
SPECIFICATION

Part Number	V_{DS} (V)	$R_{DS(ON)}$ max. 10V (mΩ)	V_{GSTH} (V)	ID Tc=25°C (A)	Q_g^{typ} $V_{gs} = 10V$ (nC)	Package
TQM026NH06LCR	60	2.6	1.4~2.4	100	76	PDFN56U
TQM027NH06CR		2.7	2.4~3.6	100	84	
TQM037NH06LCR		3.7	1.4~2.4	100	54	
TQM038NH06CR		3.8	2.4~3.6	100	52	
TQM050NH06LCR		5.0	1.4~2.4	81	41	
TQM052NH06CR		5.2	2.4~3.6	81	40	
TQM080NH06LCR		8.0	1.4~2.4	54	25	
TQM085NH06CR		8.5	2.4~3.6	54	24	
TQM115NH06LCR		11.5	1.4~2.4	49	17	
TQM120NH06CR		12.0	2.4~3.6	48	16	
TQM130NH06LDCR		13.0	1.4~2.4	40	17.2	PDFN56UD
TQM130NH06DCR		13.0	2.4~3.6	40	16.2	

FEATURES



**WETTABLE FLANK ENHANCED
AOI ACCURACY**



LOWER TEMPERATURE COEFFICIENT
The $R_{DS(ON)}$ value at temperatures of
-55 °C ~ 175 °C
presented less variation.



**AUTOMOTIVE
QUALIFIED** **AEC-Q101**



EXCELLENT FOM ($Q_g \times R_{DS(ON)}$)

APPLICATIONS



AUTOMOTIVE



**DC/DC
CONVERTER**



TELECOM



**POWER
SUPPLY**



MOTOR



**TAIWAN
SEMICONDUCTOR**

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