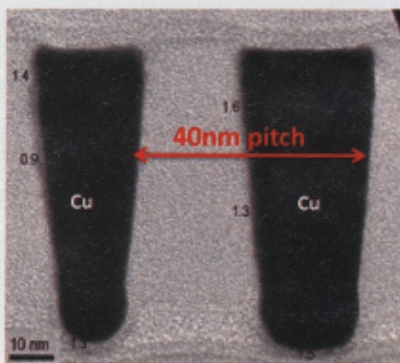


# 20nm half pitch interconnects

imec has taken a major step towards 20nm half pitch interconnects by producing electrically functional copper lines embedded into silicon oxide using a spacer-defined double patterning approach.

"We are very proud to be the world's first in developing and processing such small on-pitch working interconnects," said Zsolt Tokai, Programme Director of Interconnects at imec. "Spacer-defined double patterning has recently gained interest as the patterning technique for future FLASH memory devices. I'm confident that memory companies will benefit from this state-of-the-art result."

Scaling of interconnects towards 20nm half pitch faces many challenges. Double patterning lithography is needed since the metal lines cannot be achieved in a single print. Therefore, a solution is needed for the actual design split of the structures and the alignment of the different masks.



Cross sectional TEM analysis of 20nm half pitch interconnects after integration into single damascene using a spacer defined double patterning approach

## Pre-compliance EMC test services

From its dedicated engineering facility in Liverpool, MPE Ltd has for over 70 years specialised in the design and manufacture of EMC filter and capacitor solutions for a variety of applications, including vehicles, ships, power supplies, radar, computing, and communications facilities.

Now, in response to customers' requests, the company is launching pre-compliance EMC testing for the military vehicle market, providing it either on-site or in-house.

MPE is delivering a diagnostic pre-

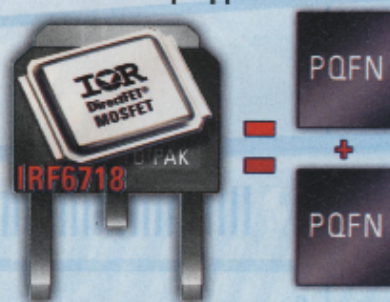
compliance EMC test service to help define the most cost-effective choice of EMI suppression to meet military EMC standards such as DEF STAN 59-411 and MILSTD 461, before major compliance costs are incurred. Operating a new, portable, Rohde & Schwarz model ESL6 EMI test receiver with very high precision from 9 kHz to 6 GHz frequency, MPE's evaluation service includes baseline noise measurements, comparison to specifications and identification of local areas and causes of non-compliance.



epd 7

## IR's IRF6718 Delivers Industry's Lowest $R_{DS(ON)}$ \*

Optimized for Active ORing and Hot Swap Applications



### Features

- Industry Lowest  $R_{DS(ON)}$  for reduced conduction losses
- Superior electrical and thermal performance in smaller footprint than D<sup>2</sup>Pak
- Dual-sided cooling compatible
- Reduces component count and board space compared to competing solutions
- Compatible with existing Surface Mount Techniques
- RoHS compliant containing no Lead or Bromide

Part Number	Package Size (mm x mm)	$R_{DS(ON)}$ @ 10V typ. (mΩ)	$I_D$ @ $T_A = 25^\circ\text{C}$ (A)
IRF6718	7.1 x 9.1	0.5	270
Competitor 1	10.7 x 15.9	0.7	180
Competitor 2	5.1 x 6.1	0.95	80
Competitor 3	5.1 x 6.1	1.5	65

\* Based on data compiled September 2009

For more information call  
+ 49 (0) 6102 884 311 or visit  
[www.irf.com](http://www.irf.com)

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