

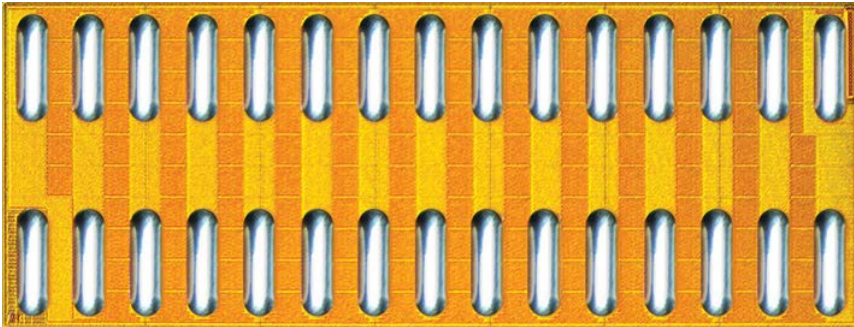
# EPCDESIGNTOOL\_XL-EM

## Mechanical Die for Electromigration Testing

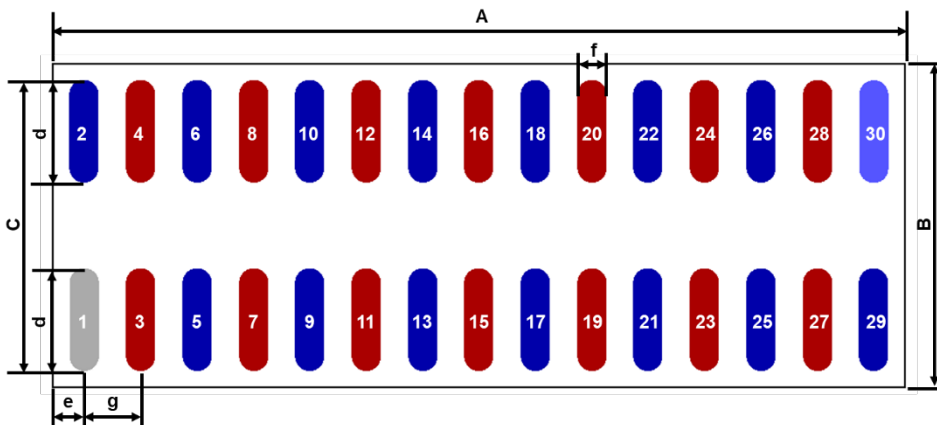
EPCDESIGNTOOL\_XL-EM are sized equivalent to EPC family of devices [EPC2020](#), [EPC2021](#), [EPC2022](#), [EPC2023](#), [EPC2024](#) with die size 6.1 mm x 2.3 mm.

These devices have internal metal layers shorted for electromigration reliability testing.

**Figure 1: Die Photo for EPCDESIGNTOOL\_XL-EM**



**Figure 2: Die Outline (Solder Bar View)**



DIM	MICROMETERS		
	MIN	Nominal	MAX
A	6020	6050	6080
B	2270	2300	2330
c	2047	2050	2053
d	717	720	723
e	210	225	240
f	195	200	205
g	400	400	400

**Pad 1 is Gate;**

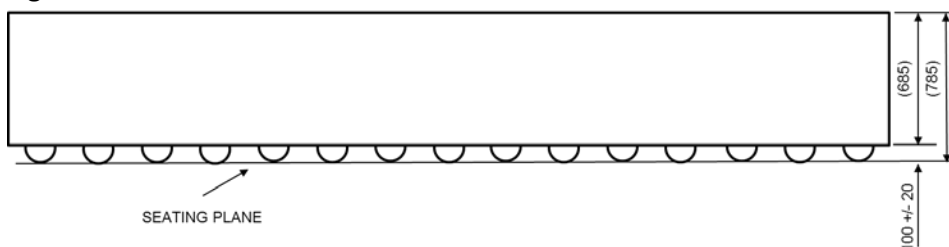
**Pads 2, 5, 6, 9, 10, 13, 14, 17, 18, 21, 22, 25, 26, 29 are Source**

**Pads 3, 4, 7, 8, 11, 12, 15, 16, 19, 20, 23, 24, 27, 28 are Drain**

**Pad 30 is Substrate**

**NOTE: Drain and Source are internally shorted at Metal 1 to create a metal resistor**

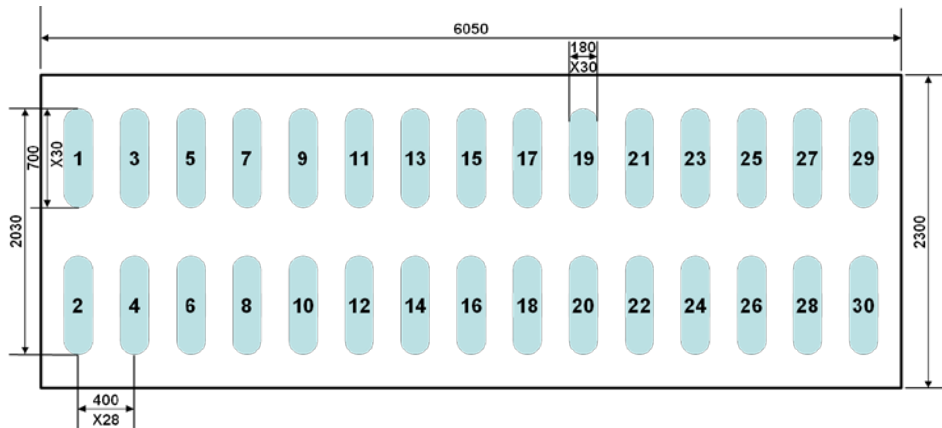
**Figure 3: Side View**



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## Mechanical Die for Electromigration Testing

Figure 4: Recommended Land Pattern (units in  $\mu\text{m}$ )



Land pattern is solder mask defined  
Solder mask opening is 180  $\mu\text{m}$   
It is recommended to have on-Cu trace PCB vias

**Pads 1 is Gate;**

**Pads 2, 5, 6, 9, 10, 13, 14, 17, 18, 21, 22, 25, 26, 29 are Source**

**Pads 3, 4, 7, 8, 11, 12, 15, 16, 19, 20, 23, 24, 27, 28 are Drain**

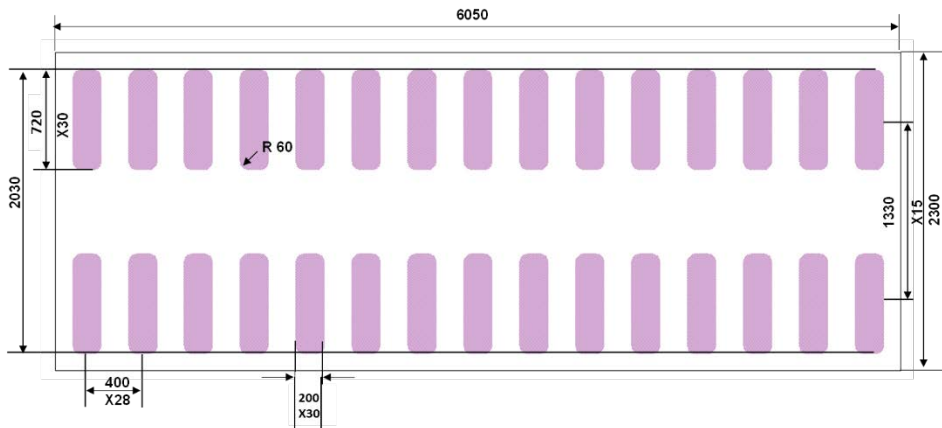
**Pad 30 is Substrate**

Figure 5: Recommended Stencil Pattern (units in  $\mu\text{m}$ )

Intended for use with SAC305 Type 3 solder.

Recommended stencil should be 4mil (100  $\mu\text{m}$ ) thick, must be laser cut, openings per drawing.

Additional assembly resources available at [epc-co.com/epc/DesignSupport/AssemblyBasics.aspx](http://epc-co.com/epc/DesignSupport/AssemblyBasics.aspx)



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EPC Patent Listing: [epc-co.com/epc/AboutEPC/Patents.aspx](http://epc-co.com/epc/AboutEPC/Patents.aspx)

Revised December, 2017