EPD8819 Product Brief

EPD8819 is a single chip display driver IC for LTPS and LTPO AMOLED application. It has highly integrated timing controller, GRAM, source driver, GOA controller, power management and so on. The internal GRAM is used as frame buffer to store the image data from AP for panel self-refresh.

EPD8819 is compliant to MIPI COMBO PHY (D-PHY V1.1, C-PHY V1.0) and DSI2 V1.0specification, and each MIPI lane supports up to 1.5Gbps/1.3Gsps high speed data transmission. It supports flexible resolution until maximum 1284 (H) x 2800 (V) and max. 144Hz. It is also support for SPR panel application. Considering LTPO request, EPD8819 can support 1~144Hz for dynamic frequency as AP request.

EPD8819 adopts digital gamma architecture and support separated R/G/B gamma correction settings. And EPD8819 supports a series of display enhancement features such as Over-Driving Compensation (ODC) base frame base, IR-drop Compensation (IRC), Crosstalk Compensation(CTB), 3D LUT, HDR, Sunlight Readability, Sharpness, etc.

EPD8819 also support some function for power optimize function such as:
- ELVDD compensation
- Dynamic ELVSS/VINT
- Dynamic VGMP/VGSP

EPD8819 can meeting currently all the panel and end-customer request for voltage setting as below:
- Supply voltage and range
    - VDDI for IO supply voltage: 1.65V ~ 1.95V
    - VDDIP for logic supply voltage: 1.2V ~ 1.95V
    - VDDIO for 1.2/1.8v IO supply voltage :1.1~1.95V
    - VCI for analog supply voltage: 2.65V ~ 3.6V
    - AVDD for analog supply voltage: 6.0V ~ 8.0V
- Output voltage and range
    - VREGOUT: 4.5V ~ 7.7V
    - VGS: 0.2V ~ 5.5V
    - VINT1/2/3: -7.4V ~ +7.4V
    - VGH1/2: 5V ~ 13V
    - VGL1/2: -13V ~ -5V
    - IN_ELVDD1/2: 2.5V ~ 7.3V
    - IN_ELVSS: -6.6V ~ -0.5V

EPD8819 is available now in COP packaging and (-40 to +85℃) qualified.

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PAD Configuration
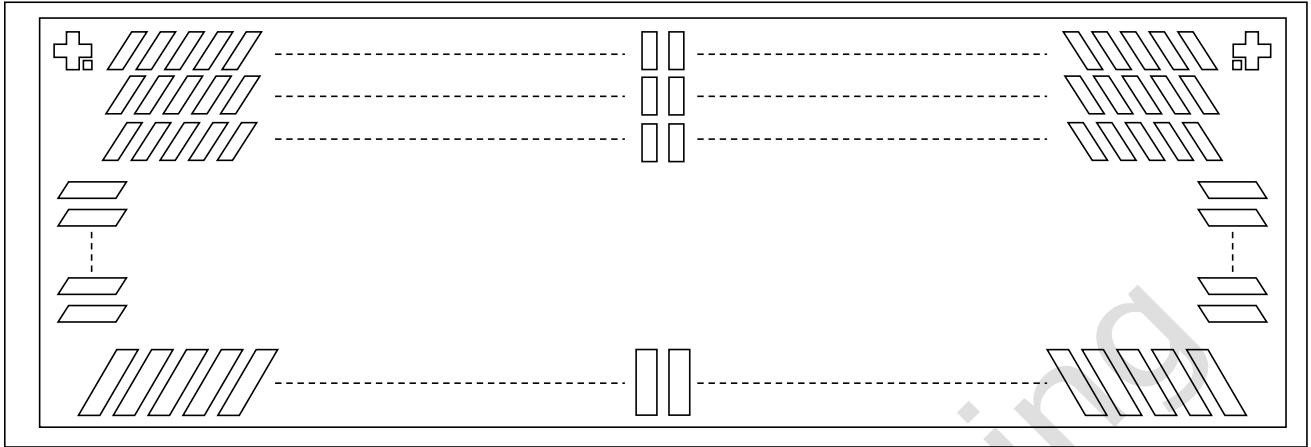
Bump Information

Item	Pad No.	Size		Unit
		X (Length)	Y (Width)	
Chip size (with S/L 70μm)	–	32920	1330	μm
Bumped pad height	Height	12 (TBD)		
	Tolerance in chip	±2		
Chip thickness	–	170 (3)		

Notes

- Dimension of bump pad size is based on bump TOP size.
- Scribe lane 70μm is included in this die size.
- Wafer thickness can be varied based on the customer's need.

BEIJING ESWIN COMPUTING TECHNOLOGY CO., LTD.