

EPD8818 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, etc. The internal GRAM is used as frame buffer to store the image data from AP for panel self-refresh.

EPD8818 is compliant to MIPI COMBO PHY (D-PHY V1.1, C-PHY V1.0) and DSI2 V1.0 specification, and each MIPI lane supports up to 1.35Gbps/1.0Gbps high speed data transmission. It supports flexible resolution until maximum 1280(H) x 2800 (V) and max. 144Hz is also support for SPR panel application.

EPD8818 adopts digital gamma architecture and supports separated R/G/B gamma correction settings. EPD8818 supports a series of display enhancement features such as Over-Driving Compensation (ODC), IR-drop Compensation (IRC), Crosstalk Compensation(CTB), 3D LUT, HDR, Sunlight Readability, Sharpness, etc.

EPD8818 also supports some function for power optimize function such as:

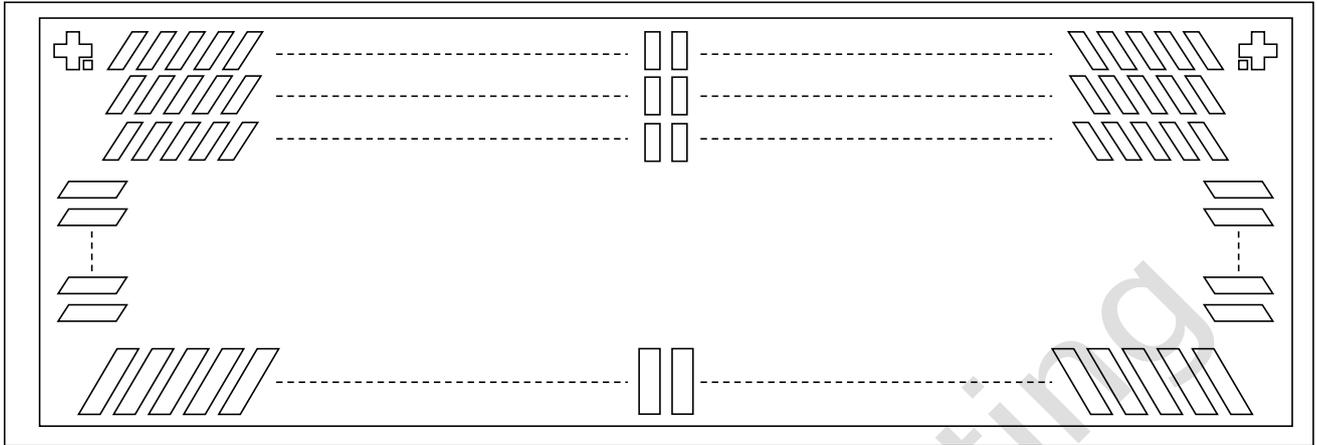
- ELVDD compensation
- Dynamic ELVSS/VINT
- Dynamic VGMP/VGSP

EPD8818 can meet currently all the panel and end-customer request for voltage setting as followed:

- Supply voltage and range
  - VDDI for IO supply voltage: 1.65V ~ 1.95V
  - DVDD for logic supply voltage (Optional): 1.1V ~ 1.25V
  - 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 ~ 4.5V
  - VINT1/2/3: -7.5V ~ 6V
  - VGH1/2: 5V ~ 13V
  - VGL1/2: -13V ~ -5V
  - IN\_ELVDD1/2: 3.0V ~ 7.3V
  - IN\_ELVSS: -5V ~ -0.5V

EPD8818 is available now in COP packaging and (-40 to +85°C) qualified.

## PADs Configuration



## Bump Information

Item	Pad No.	Size		Unit
		X (Length)	Y (Width)	
Chip size (with S/L 70 $\mu$ m)	-	32,920	1610	$\mu$ m
Bumped pad height	Height	12 (TBD)		
	Tolerance in chip	$\pm 2$		
Chip thickness	-	170 (3)		

## Notes

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

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