

Panasonic

Wide variety of high performance kits

LCD Driver Series

■ Overview

LCD driver series makes it possible to support for every size LCD panels.

TFT digital source driver series is capable of displaying full color with built-in high performance DA converters.

This series consists of line inverted drive, dot inverted drive / displaying 262k color ~ 16700k color / 240 ~ 480 outputs. TFT gate driver is ultra slim chip. Therefore the kit of TFT digital source driver series and TFT gate driver series suits for VGA ~ UXGA LCD panels.

TFT analog source driver series supports for Car navigation, STN driver series supports for Cellular and Internet-display.

■ Feature

- Low power consumption
- Full color : 6bit/262k color, 8bit/16700k color
Capable of displaying full color with built-in high performance DA converters (TFT source driver)
- Outputs : 120 ~ 480
- Ultra slim chip

■ Applications

Mobile, Personal Computer, Monitor, Car navigation, Cellular, Internet-display

■ Basic specifications

- TFT digital source driver series
- TFT analog source driver series
- TFT gate driver series
- STN segment driver series
- STN common driver series
- STN controller driver series for Cellular
- TFT digital source driver series with RAM for Cellular
- TFT gate driver series with DC/DC converter for Cellular
- TFT digital source driver series for Mobile
- TFT gate driver series for Mobile

The products and specification are subject to change without any notice. Please ask for the latest Product Standards to guarantee the satisfaction of your product requirements.

Semiconductor Company, Matsushita Electric Industrial Co., Ltd.

■ TFT digital source driver series

Item Type	Outputs	Voltage(V)		Maximum Frequency (MHz)	Features
		Input logic	Output		
MN838806	384/402	2.7~3.6	5.23~5.77	45	<ul style="list-style-type: none"> • R - DAC • 6bit (262 k colors) • Data inversion control • Dot-inverted drive
MN838808	384/402	2.7~3.6	4.5~5.5	40	<ul style="list-style-type: none"> • R - DAC • 6-bit (262 k colors) • Data inversion control • Line-inverted drive
MN838821	384	2.7~3.6	7.5~9.7	45	<ul style="list-style-type: none"> • R - DAC • 6-bit (262 k colors) • Middle voltage • Dot-inverted / source-inverted drive • Data inversion control
MN838820	420	2.7~3.6	7.5~9.7	35	<ul style="list-style-type: none"> • R - DAC • 6-bit (262 k colors) • Middle voltage • Dot-inverted / source-inverted drive • Data inversion control
MN838875	384	2.7~3.6	6.0~9.7	65	<ul style="list-style-type: none"> • R - DAC • Small signal interface for low EMI • 6-bit (262 k colors) • Dot-inverted / N line-inverted drive
MN838874	402/420	2.7~3.6	6.0~9.7	65	<ul style="list-style-type: none"> • R - DAC • Small signal interface for low EMI • 6-bit (262 k colors) • Dot-inverted /N line-inverted drive
MN838873	480	2.7~3.6	6.0~9.7	85	<ul style="list-style-type: none"> • R - DAC • Small signal interface for low EMI • 6-bit (262 k colors) • Dot-inverted /N line-inverted drive
MN838860 *Under development	384	2.7~3.6	6.0~10.7	75	<ul style="list-style-type: none"> • R - DAC • Small signal interface for low EMI • 8-bit (16700 k colors) • Dot-inverted /N line-inverted drive

■ TFT analog source driver series

Item Type	Outputs	Voltage(V)		Maximum Frequency (MHz)	Features
		Input logic	Output		
MN83901A	240	2.7~5.5	4.5~5.5	15	<ul style="list-style-type: none"> • Serial/simultaneous data sampling • For striped/delta disposition panel • Wide dynamic range 4.6 V • Ultra slim chip • COG

■ TFT gate driver series

Type \ Item	Outputs	Voltage(V)		Maximum Frequency (MHz)	Features
		Input logic	Output		
MN863440	200 / 240 / 256 / 263	2.3 ~ 3.6	40	0.5	<ul style="list-style-type: none"> • Low voltage logic drive • Output voltage 43 V • XDon function • Ultra slim chip
MN863448	300 / 308	2.3 ~ 3.6	40	0.5	<ul style="list-style-type: none"> • Low voltage logic drive • Output voltage 40 V • XDon function • Ultra slim chip

■ STN segment driver series

Type \ Item	Outputs	Voltage(V)		Maximum Frequency (MHz)	Features
		Input logic	Output		
MN863830	240	2.5 ~ 4.5	6	30	<ul style="list-style-type: none"> • Minimum crosstalk loss function • Ultra slim chip
		4.5 ~ 5.5		55	
MN863831	160	2.5 ~ 4.5	6	30	<ul style="list-style-type: none"> • Minimum crosstalk loss function • Ultra slim chip
		4.5 ~ 5.5		55	
	320	3.0 ~ 5.5		30	

■ STN common driver series

Type \ Item	Outputs	Voltage(V)		Maximum Frequency (MHz)	Features
		Input logic	Output		
MN86372	120	2.5 ~ 5.5	± 40	0.2	<ul style="list-style-type: none"> • Output voltage ±40 V • Ultra slim chip

■ STN controller driver series for Cellular

Type \ Item	color	Outputs		Voltage(V)		Features
		segment	common	Input logic	Output	
MN86520	mono-chrome	132	65	1.8 ~ 5.5	16	<ul style="list-style-type: none"> • Very low power consumption • Display RAM 8,580-bits • 8-bit MPU interface
MN86521	mono-chrome	132	65	1.8 ~ 5.5	16	<ul style="list-style-type: none"> • Very low power consumption • Display RAM 8,580-bits • 8-bit MPU interface • On chip voltage regulator
MN86524	256	384	65	1.8 ~ 3.6	16	<ul style="list-style-type: none"> • 256 color display • Very low power consumption • Display RAM 81,920-bits • 8/16-bit MPU interface

■ TFT digital source driver series with RAM, controller for Cellular

Type \ Item	Outputs	Voltage(V)		Maximum Frequency (MHz)	Features
		Input logic	Output		
MN838892 *Under development	408	2.4~3.6	3~5.5		<ul style="list-style-type: none"> • R - DAC • 6-bit(262 k colors) • Power save function • Built-in 431 k-bit SRAM

■ TFT gate driver series with DC / DC converter for Cellular

Type \ Item	Outputs	Voltage(V)		Maximum Frequency (MHz)	Features
		Input logic	Output		
MN863480 *Under development	176	2.4~3.6	40	0.5	<ul style="list-style-type: none"> • Output voltage 40 V • 2 level of output • XDon function • Built-in DC/DC converter

■ TFT digital source driver series for mobile

Type \ Item	Outputs	Voltage(V)		Maximum Frequency (MHz)	Features
		Input logic	Output		
MN838899	240/264	2.6~3.6	4.0~5.5	15	<ul style="list-style-type: none"> • R - DAC • 6-bit (262 k colors) • Data inversion control • Line-inverted drive
MN838809	264	1.65~3.6	3.2~5.5	15	<ul style="list-style-type: none"> • R - DAC • 6-bit (262 k colors) • Data inversion control • Line-inverted drive
MN838898	360	1.65~3.6	3.0~5.5	15	<ul style="list-style-type: none"> • R - DAC • 6-bit (262 k colors) • Data inversion control • Line-inverted drive
MN838896	408	1.65~3.6	3.0~5.5	10	<ul style="list-style-type: none"> • R - DAC • 6-bit (262 k colors) • Data inversion control • Line-inverted drive

■ TFT gate driver series for mobile

Type \ Item	Outputs	Voltage(V)		Maximum Frequency (MHz)	Features
		Input logic	Output		
MN863583	244	2.6~3.6	40	0.5	<ul style="list-style-type: none"> • Output voltage 40 V • 2 level of output
MN863584	244	2.6~3.6	40	0.5	<ul style="list-style-type: none"> • Output voltage 40 V • 2 level of output • Input level 1.8 V
MN863587	322/320	2.6~3.6	40	0.5	<ul style="list-style-type: none"> • Output voltage 40 V • 2 level of output • XDon function • Power on reset function