New Product Announcement

AP3154A/56

Small LCD screen backlighting charge pump LED drivers

Description

The AP3154A and AP3156 are charge pump LED drivers for small LCD screen backlighting. They are well suited for LCD screens less than 3”.

Both use a tri-mode charge pump switch (1X), fractional (1.5X), and doubling (2X) conversion to maximize efficiency in white LED applications.

A low external parts count (two 1µF flying and two small 1µF capacitors at V_{IN} and V_{OUT}) make them ideally suited for small, battery-powered applications.

A serial digital interface is used to enable, disable and set current for each LED with a 32-level logarithmic scale plus four low-current settings down to 50µA for optimized efficiency..

The Diodes advantage

The AP3154A and AP3156 provide a simple cost effective solution for small screen LCD backlighting

- **x1/x1.5/x2 tri-mode voltage conversion**
  Increases efficiency giving longer battery life.
- **No inductor, diodes**
  Reduces EMI and reduces PCB area
- **SDI digital interface**
  Versatile control to program LED current with 16-level/32-level logarithmic scale
- **Small footprint low profile packages**
  Reduces PCB area and height restrictions
- **Soft-start & Soft-stop**
  Reduces In-rush current during start up and power down.
- **SCP,OVP,UVLO,TSD**
  Improved robustness

Circuit functions

- **LCD backlighting**
- **Keypad backlighting**
- **Mobile phone flashlight**

DIODES INCORPORATED

New Product Announcement

AP3154A/56

Small LCD screen backlighting charge pump LED drivers

Diodes Backlighting IC

Part Number	Status	Input Voltage (V)	Max Output Voltage (V)	Frequency (MHz)	Efficiency (%)	Typ Quiescent Current (mA)	Typ Standby Current (µA)	SW RDS (Ω)	Dimming	OVP	Soft Start	VFB (V)	Operating temperature range (°)	Package
AP3154A	New	2.7 ~ 5.5		0.6/1.2/1.8	88	1.2	1	-	SDI	Yes	Yes	-	-40 to +85	DFN3030-12
AP3156	New	2.7 ~ 5.5		0.5/1.0/2.0	88	1.5	1	-	SDI	Yes	Yes	-	-40 to +85	QFN4040-16
AP5724	MP	2.7-5.5	26	1.4	84	2	1	0.75	DC/PWM	Yes	Yes	0.1	-25 to +85	SOT26 DFN2020C-6
AP5725	MP	2.7-5.5	26	1.4	84	2	1	0.75	DC/PWM	Yes	Yes	0.25	-25 to +85	SOT26 DFN2020C-6
AP5726	MP	2.7-5.5	26	1.4	84	2	1	0.75	DC/PWM	Yes	Yes	0.31	-25 to +85	SOT26 DFN2020C-6
ZXLD1100	MP	2.5 ~ 5.5	28V	1	80	0.06	0.5		DC/PWM	No	No		-40 to +85	SC70-6
ZXLD1101	MP	2.5 ~ 5.5	28V	1	80	0.06	0.5		DC/PWM	No	No		-40 to +85	TSOT23-6
ZXLD1937	MP	2.5 ~ 5.5	28V	1	80	0.06	0.5		DC/PWM	No	No		-40 to +85	TSOT23-5

To find out more information:

Web page http://www.diodes.com/products/catalog/detail.php?item-id=4996

Datasheet http://www.diodes.com/datasheets/AP3154A.pdf

http://www.diodes.com/datasheets/AP3156.pdf

Ordering information

Device	Packaging	Pack mark	Reel size	Tape width	Quantity
AP3154AFG-7	TDFN3030-12	F9 YWX	7”	8mm	3000
AP3156FVG-7	QFN4040-16	F7 YWX	7”	8mm	1500

All variants are in packages that are “Green” Molding Compound (No Br, Sb) with Lead Free Finish/RoHS Compliant (Note 1)

Notes:1. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied, see EU Directive 2002/95/EC Annex Notes

Codes for date coding on part marks

Y Year 0~9 **W** A~Z week 1~26 a~z week 27~53 **X** A~Z: Green