

## ADVANCED CURRENT REGULATOR

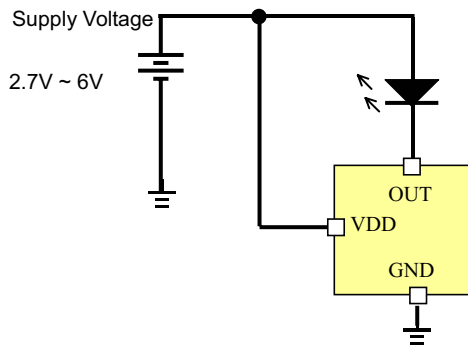
### DESCRIPTION

The AMC7130 is a low dropout current regulator rated for 20mA, 40mA, 60mA, and 80mA constant sink current. The low quiescent current and low dropout voltage is achieved by advanced Bi-CMOS process.

### FEATURES

- No external component required.
- 20/40/60/80mA constant sink current.
- Output short / open circuit protection.
- Low dropout voltage.
- Low quiescent current
- Build-in thermal protection
- Supply voltage range 2.7V ~ 6V
- 2KV HBM ESD protection
- Advanced Bi-CMOS process.
- SOT-23 3L package

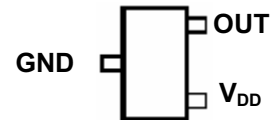
### TYPICAL APPLICATIONS CIRCUIT



### APPLICATIONS

- LED driver

### PACKAGE PIN OUT



3-Pin Plastic SOT-23  
(Top View)

### ORDER INFORMATION

DB	SOT-23	
	3-pin	
AMC7130-20DB		20mA
AMC7130-40DB		40mA
AMC7130-60DB		60mA
AMC7130-80DB		80mA

Note: 1. All surface-mount packages are available in Tape & Reel. Append the letter "T" to part number (i.e. AMC7136ADLT).  
2. The letter "F" is marked for Lead Free process.

**POWER DISSIPATION TABLE**

Package	$\theta_{JA}$ ( $^{\circ}\text{C/W}$ )	Derating factor ( $\text{mW}/^{\circ}\text{C}$ ) $T_A \geq 25^{\circ}\text{C}$	$T_A \leq 25^{\circ}\text{C}$ Power rating (mW)	$T_A = 70^{\circ}\text{C}$ Power rating (mW)	$T_A = 85^{\circ}\text{C}$ Power rating (mW)
DB	220	4.5	568	363	295

Note :

 Junction Temperature Calculation:  $T_J = T_A + (P_D \times \theta_{JA})$ .

 $P_D$ : Power Dissipation,  $T_A$ : Ambient temperature,  $\theta_{JA}$ : Thermal Resistance-Junction to Ambient

 The  $\theta_{JA}$  numbers are guidelines for the thermal performance of the device/PC-board system.

All of the above assume no ambient airflow.

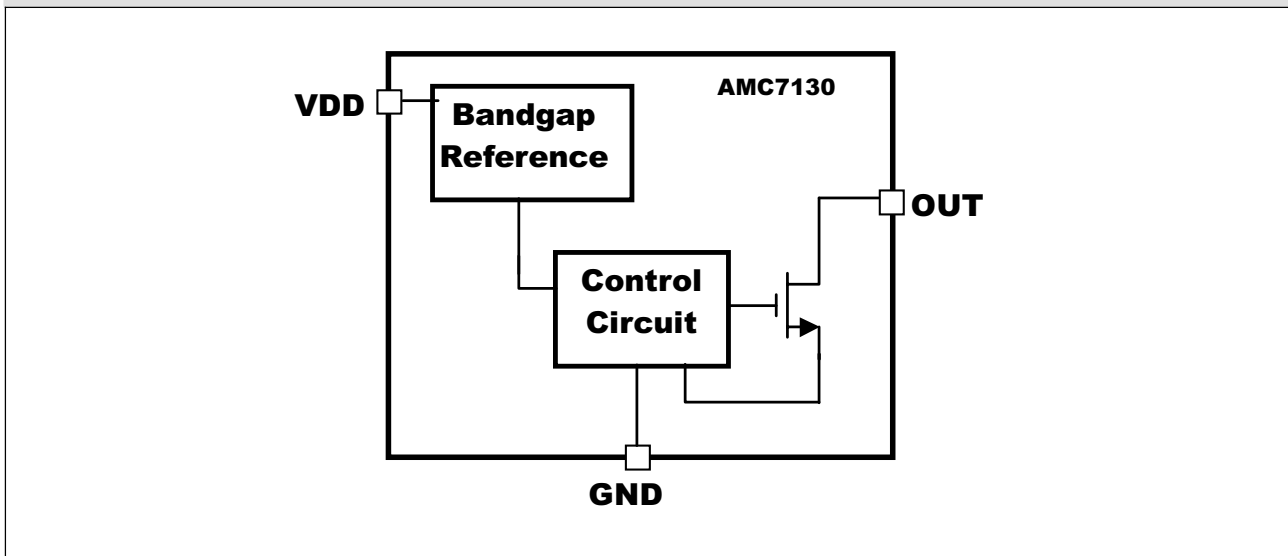
**ABSOLUTE MAXIMUM RATINGS**

Input Voltage, $V_{DD}$	-0.3V to 7V
Output Voltage, $V_{LEDn}$	-0.3V to 7V
Maximum Junction Temperature, $T_J$	150 $^{\circ}\text{C}$
Storage Temperature Range	-40 $^{\circ}\text{C}$ to 150 $^{\circ}\text{C}$
Lead Temperature (soldering, 10 seconds)	260 $^{\circ}\text{C}$

Note:

Exceeding these ratings could cause damage to the device. All voltages are with respect to Ground.

Currents are positive into, negative out of the specified terminal.

**BLOCK DIAGRAM**


**PIN DESCRIPTION**

Pin Name	Pin Function
OUT	Output pin, connect to Load.
V <sub>DD</sub>	Power supply
GND	Ground

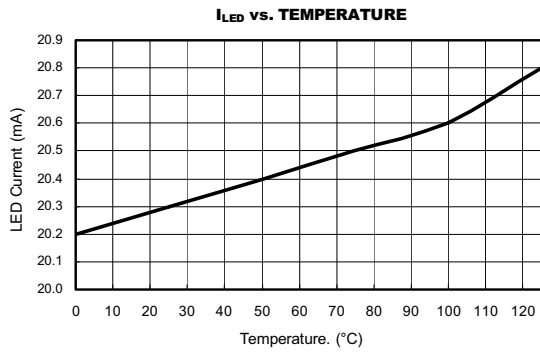
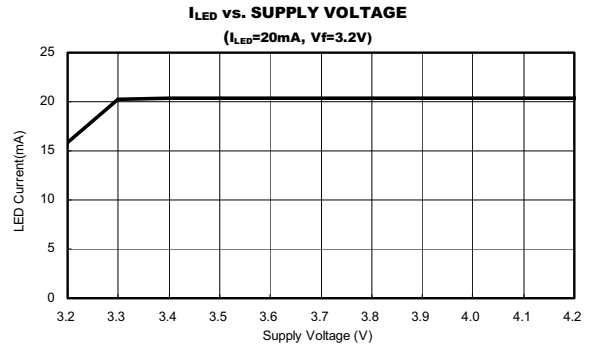
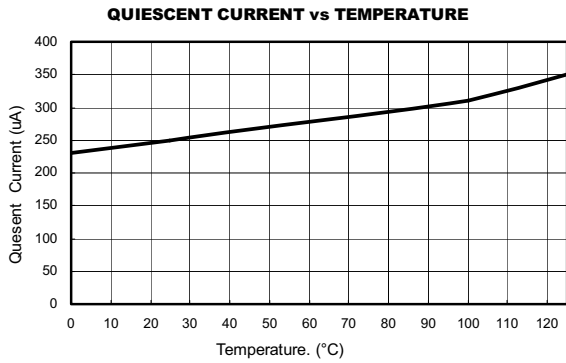
**RECOMMENDED OPERATING CONDITIONS**

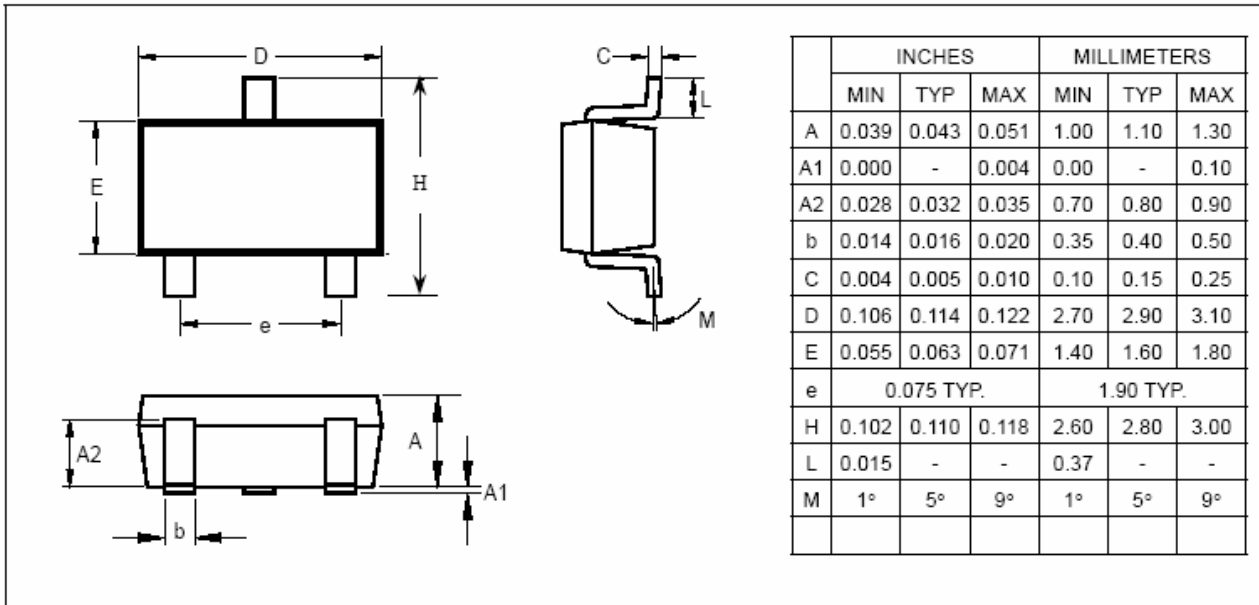
Parameter	Symbol	Min	Typ	Max	Unit
Supply Voltage	V <sub>DD</sub>	2.7		6	V
Output Sink current	I <sub>OUT</sub>			100	mA
Operating free-air temperature range	T <sub>a</sub>	-40		+85	°C

**DC ELECTRICAL CHARACTERISTICS**

V <sub>DD</sub> =3.7V, T <sub>a</sub> =25°C, No Load, ( Unless otherwise noted)							
Parameter	Symbol	Condition	Min	Typ	Max	Unit	Apply Pin
Output Sink Current	I <sub>SINK</sub>	AMC7130-20, V <sub>OUT</sub> =0.2V	19	20	21	mA	OUT
		AMC7130-40, V <sub>OUT</sub> =0.2V	38	40	42		
		AMC7130-60, V <sub>OUT</sub> =0.2V	57	60	63		
		AMC7130-80, V <sub>OUT</sub> =0.2V	76	80	84		
Load Regulation		V <sub>OUT</sub> =0.2V to 3V			1	%/V	
Line Regulation		V <sub>DD</sub> = 3V to 6V, V <sub>OUT</sub> =0.2V			1	%A/ V	
Output Dropout Voltage	V <sub>OUTL</sub>			70	100	mV	
Supply Current Consumption	I <sub>DD</sub>			200		uA	V <sub>DD</sub>

Note 1: Output dropout voltage: 90% x I<sub>OUT</sub> @ V<sub>OUT</sub>=200mV

**TYPICAL OPERATION CHARACTERISTICS**


**PACKAGE**
**Surface Mount SOT-23**




原厂授权代理

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深圳市四海恒通科技有限公司成立于 2005 年，是一家专业提供 LED 驱动电源技术解决方案的高科技企业。公司致力于为广大客户提供 LED 驱动电源技术解决方案以及电子元器件供应，目前主要代理：ADDtek，AXEelite，PowTech 等品牌的半导体产品，产品广泛应用于射灯、日光灯、球泡灯、手电筒、洗墙灯、埋地灯、庭院灯、应急灯、矿灯、汽车照明等 LED 照明产品。以客为尊，至诚至信，多年来我们在电子行业的专心耕耘与努力，不断追求创新，承接上游原厂产品与技术，提供下游专业技术支持服务，为客户提供经济、实用、高品质的产品为企业宗旨，提供“一站式采购”解决方案，成为广大电子企业客户最满意的合作伙伴之一。

代理产品线：

☆LED 恒流驱动 IC

☆LED 背光驱动 IC

☆LED 保护 IC

☆ LED 驱动电源

☆POWER MOSFET

☆降 EMI（无源磁珠）

☆电源管理 IC（降压、升压、升/降压、稳压、复位…）

