

GENERAL DESCRIPTION

The PT4403 is a low dropout current regulator with 350mA constant current sink. The dropout voltage is typically 150mV and the quiescent current is only 50uA. Without any external components required, the PT4403 occupies very small space and provides a low cost solution. The PT4403 can be used as a high current LED driver, as well as a current sink.

The built-in thermal shutdown protection shuts down the chip when the chip temperature exceeds 160°C. PT4403 is packaged in SOT-89 and SOT-252.

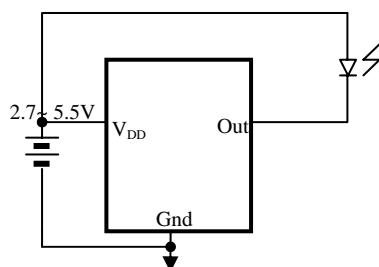
FEATURES

- Supply voltage range: 2.7V-5.5V
 - No any external component is required
 - 150mV Low Dropout voltage
 - 350mA constant current sink
 - 50uA quiescent current
 - Built-in thermal shutdown protection SOT89 and SOT252
- Package

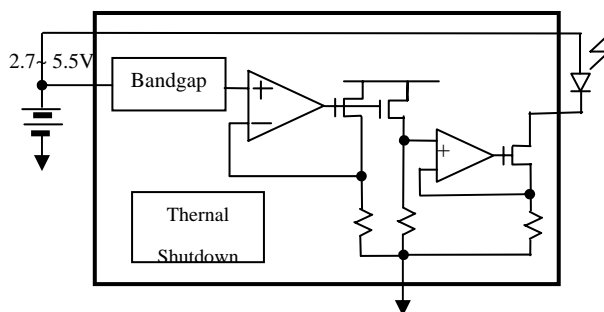
APPLICATIONS

- Power LED Driver
- Constant current sink

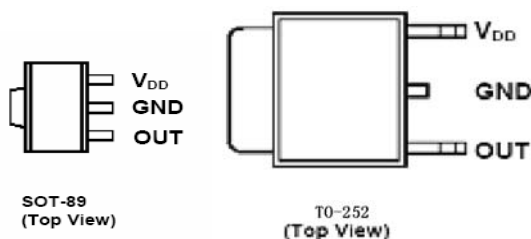
TYPICAL APPLICATIONS



BLOCK DIAGRAM



PIN ASSIGNMENT



PIN DESCRIPTIONS

Symbol	SOT23-6	MSOP-8	Description
V _{DD}	1	3	Power Supply
Gnd	2	4	Ground
Out	3	1	Constant Current Sink with 350mA

ABSOLUTE MAXIMUM RATINGS

PARAMETER	VALUE	UNIT
V _{DD} Range	-0.3~6.5V	V
V _{OUT} Range	-0.3~6.5V	V
Operation Junction Temp. Range	-40~150	°C
Storage Temp.	-55~150	°C
Package Lead Soldering Temp.	260, 10S	°C
Thermal Resistance, θ_{JA}	SOT-89	85
	TO-252	60
		°C/W

OPERATING RANGE

PARAMETER	VALUE	UNIT
V _{DD} Range	2.7~6V	V
Operating Temp. Range	-40~85	°C

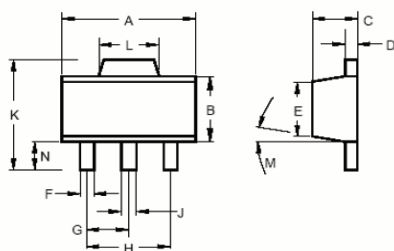
ELECTRICAL CHARACTERISTICS

$T_A=25^{\circ}\text{C}$, unless specified otherwise.

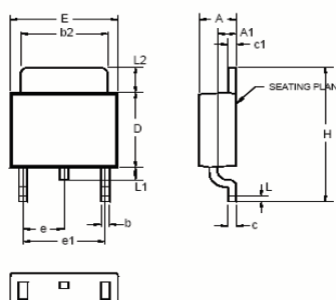
SYMBOL	ITEMS	CONDITIONS	Min.	Typ.	Max.	UNIT
V _{dd}	Input Voltage		2.7		5.5	V
I _q	No load Operating Current	No any connection to out		150		uA
	Load Regulation	V _{out} =0.2~4V			1	mA/°C
	Line Regulation	V _{dd} =3 to 6V V _{out} =0.2V			2	mA/°C
I _{out}	The output current of pin out	Dropout voltage=500mV	336	350	364	mA
V _{dp} ⁽¹⁾	Minimum Dropout voltage	I _{out} =0.9×Maximum(I _{out})		150		mV
I _T	Output current temperature coefficient			100		ppm/°C

Notes:

Dropout Voltage is defined as: the out pin voltage when the current of current sink drop to 0.9×Maximum(I_{out}) under 2.7 V input supply.

PACKAGE INFORMATION
SOT-89-3


	INCHES			MILLIMETERS		
	MIN	TYP	MAX	MIN	TYP	MAX
A	0.173	-	0.181	4.39	-	4.59
B	0.090	-	0.102	2.28	-	2.59
C	0.055	-	0.063	1.39	-	1.60
D	0.015	-	0.017	0.38	-	0.43
E	0.084	-	0.090	2.13	-	2.28
F	0.016	-	0.019	0.33	-	0.48
G	0.059 BSC			1.49 BSC		
H	0.118 BSC			2.99 BSC		
J	0.018	-	0.022	0.45	-	0.55
K	0.155	-	0.167	3.94	-	4.24
L	0.067	-	0.072	1.70	-	1.82
M	0°	-	8°	0°	-	8°
N	0.035	-	0.047	0.89	-	1.19

TO-252


	INCHES			MILLIMETERS		
	MIN	TYP	MAX	MIN	TYP	MAX
A	0.086	-	0.094	2.18	-	2.39
A1	0.040	-	0.050	1.02	-	1.27
b	-	0.024	-	-	0.61	-
b2	0.205	-	0.215	5.21	-	5.46
c	0.018	-	0.023	0.46	-	0.58
c1	0.018	-	0.023	0.46	-	0.58
D	0.210	-	0.220	5.33	-	5.59
E	0.250	-	0.265	6.35	-	6.73
e	0.090 BSC			2.29 BSC		
e1	0.180 BSC			4.58 BSC		
H	0.370	-	0.410	9.40	-	10.41
L	0.020	-	-	0.51	-	-
L1	0.025	-	0.040	0.64	-	1.02
L2	0.060	-	0.080	1.52	-	2.03