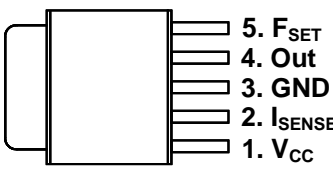


FEATURES	DESCRIPTION
<ul style="list-style-type: none">■ Operation voltage range: 4.0V to 40V■ Output current up to 1.5A■ 5 external components required■ High efficiency	<p>The SMD735 series is a power LED driver which has the capability to drive an output current from a few mA up to 1.5A. By having the PWM feature, the SMD735 series will operate with high efficiency in a wide input range from 4V to 40V and up to 200KHz operating frequency by external component.</p> <p>The SMD735 series is ideal to the applications for high power LED related end products.</p>

APPLICATIONS
<ul style="list-style-type: none">■ LED lighting devices■ Automobile■ DC to DC

PACKAGE/ORDER INFORMATION	
 <p>5-Pin Plastic TO-252 Surface Mount (Top View)</p>	<p>Order Part Number</p> <p>SMD735DLT</p>

ABSOLUTE MAXIMUM RATINGS (Note 1)

Power Supply Voltage	-0.3V – 40V
Output Voltage	-0.3V – 40V
Output Current	1.5A
Storage Temperature Range	-65°C to +150°C
Operating Junction Temperature	+150°C
Lead Temperature (soldering, 10 seconds)	260°C

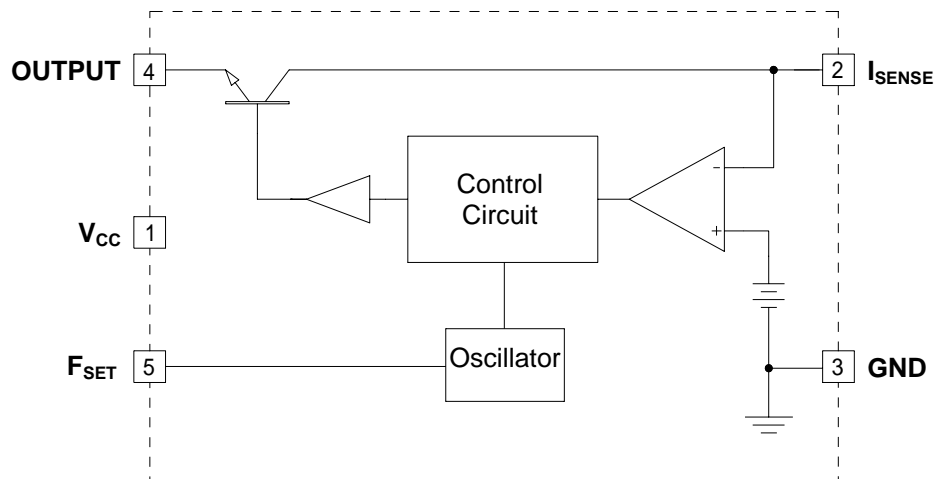
Note 1: Exceeding these ratings could cause damage to the device. All voltages are with respect to ground. Currents are positive into, negative out of the specified terminal.

POWER DISSIPATION TABLE

Package	θ_{JA} (°C /W)	Derating factor (mW/°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)
5L TO252	80	12.5	1,560	1,000	812

- θ_{JA} : Thermal Resistance-Junction to Ambient, D_F : Derating factor, P_o : Power consumption.
 Junction Temperature Calculation: $T_J = T_A + (P_D \times \theta_{JA})$, $P_o = D_F \times (T_J - T_A)$
 The θ_{JA} numbers are guidelines for the thermal performance of the device/PC-board system.
 All of the above assume no ambient airflow.

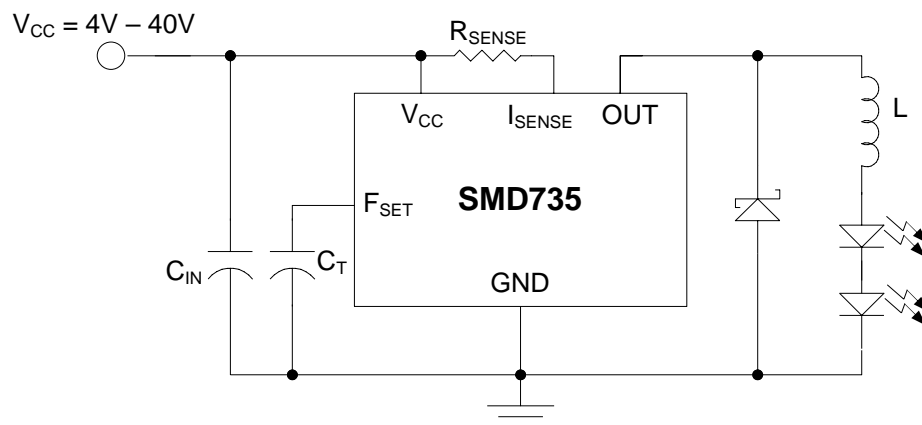
BLOCK DIAGRAM



RECOMMENDED OPERATING CONDITIONS

Parameter	Symbol	Min	Typ	Max	Units
Input Voltage	V_{CC}	4		40	V
Output Current	I_{OUT}			1.5	A
Operating free-air temperature range	T_a	-40		85	°C

TYPICAL APPLICATIONS



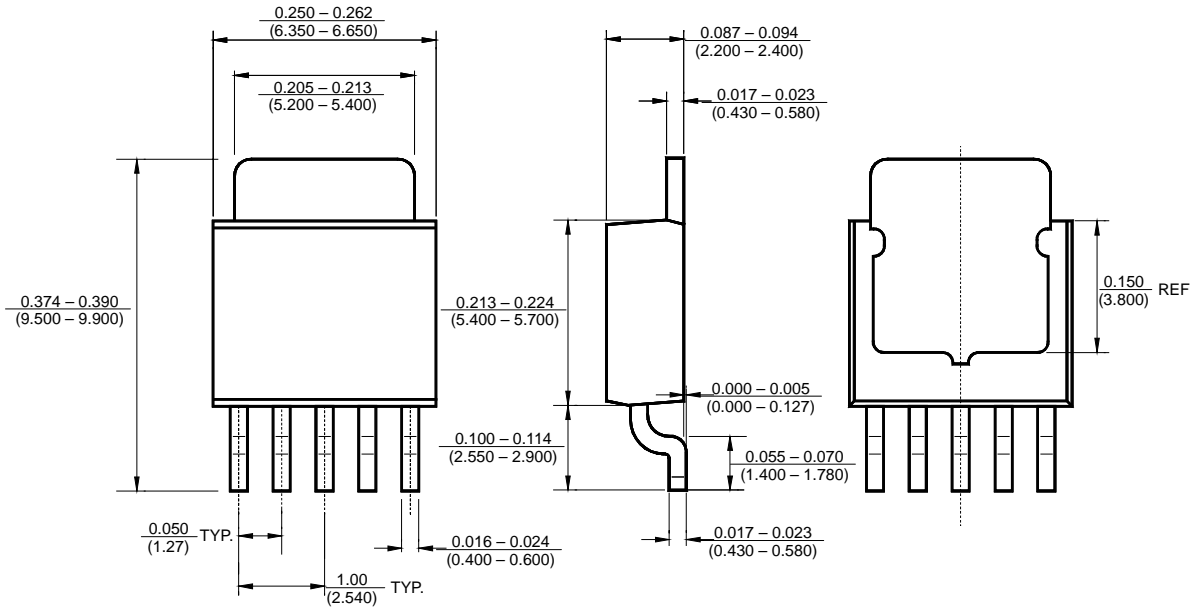
ELECTRICAL CHARACTERISTICS

Unless otherwise specified, these specifications apply $V_{CC} = 5.0\text{ V}$, $T_A = 25^\circ\text{C}$

Parameter	Test Conditions	Min	Typ	Max	Units
Supply Current	$V_{CC} = 4\text{ V} - 40\text{ V}$			4	mA
Output Drop-out Voltage	$I_{OUT} = 1\text{ A}$		1	1.31	V
Output Off current	$V_{ISENSE} - V_{OUT} = 40\text{ V}$		200	300	μA
Current Sense Voltage		300	330	360	mV
Duty Cycle	$V_{ISENSE} = V_{CC}$		85		%
F_{SET} Charge Current		-	35		μA

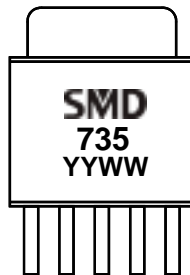
PACKAGE DESCRIPTION Dimensions in inches (millimeters) unless otherwise specified

5L TO 252



MARKING DIAGRAM

5L TO 252



YY = Year, WW = Working Week

IMPORTANT NOTICE

Shamrock Micro Devices (SMD) reserves the right to make changes to its products or to discontinue any integrated circuit product or service without notice, and advises its customers to obtain the latest version of relevant information to verify, before placing orders, that the information being relied on is current.

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