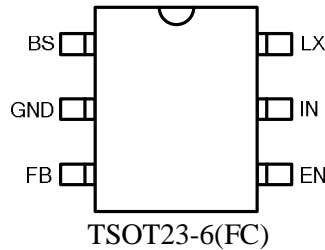




**Pinout** (top view)


Top Mark: **ML***xyz*, (Device code: ML, *x*=year code, *y*=week code, *z*=lot number code)

Pin Name	Pin Number	Pin Description
BS	1	Boot-Strap Pin. Supply high side gate driver. Decouple this pin to LX pin with 0.1uF ceramic cap.
GND	2	Ground pin
FB	3	Output Feedback Pin. Connect this pin to the center point of the output resistor divider (as shown in Figure 1) to program the output voltage: $V_{out}=0.6*(1+R1/R2)$
EN	4	Enable control. Pull high to turn on. Do not float.
IN	5	Input pin. Decouple this pin to GND pin with at least 1uF ceramic cap
LX	6	Inductor pin. Connect this pin to the switching node of inductor

**Absolute Maximum Ratings** (Note 1)

Supply Input Voltage	-----	18V
Enable Voltage	-----	V <sub>IN</sub> + 0.3V
FB Voltage	-----	4V
Power Dissipation, PD @ TA = 25°C, TSOT23-6 (FC)	-----	TBD
Package Thermal Resistance (Note 2)		
θ <sub>JA</sub>	-----	TBD
θ <sub>JC</sub>	-----	TBD
Junction Temperature Range	-----	125°C
Lead Temperature (Soldering, 10 sec.)	-----	260°C
Storage Temperature Range	-----	-65°C to 150°C

**Recommended Operating Conditions** (Note 3)

Supply Input Voltage	-----	4.5V to 16V
Junction Temperature Range	-----	-40°C to 125°C
Ambient Temperature Range	-----	-40°C to 85°C



**Electrical Characteristics**

( $V_{IN} = 12V$ ,  $V_{OUT} = 1.2V$ ,  $L = 2.2\mu H$ ,  $C_{OUT} = 47\mu F$ ,  $T_A = 25^\circ C$ ,  $I_{OUT} = 1A$  unless otherwise specified)

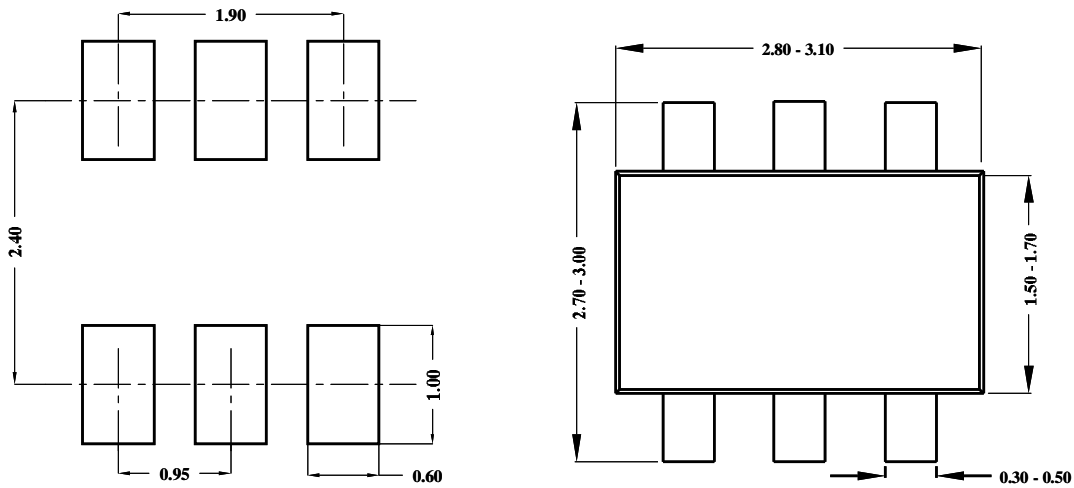
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input Voltage Range	$V_{IN}$		4.5		16	V
Quiescent Current	$I_Q$	$I_{OUT}=0, V_{FB}=V_{REF}*105\%$		100		$\mu A$
Shutdown Current	$I_{SHDN}$	$EN=0$		5	10	$\mu A$
Feedback Reference Voltage	$V_{REF}$		0.591	0.6	0.609	V
FB Input Current	$I_{FB}$	$V_{FB}=3.3V$	-50		50	nA
Top FET RON	$R_{DS(ON)1}$			80		m $\Omega$
Bottom FET RON	$R_{DS(ON)2}$			40		m $\Omega$
Bottom FET Valley Current Limit	$I_{LIM}$		3			A
EN Rising Threshold	$V_{ENH}$		1.5			V
EN Falling Threshold	$V_{ENL}$				0.4	V
Input UVLO Threshold	$V_{UVLO}$				4.5	V
UVLO Hysteresis	$V_{HYS}$			0.3		V
Min ON Time				80		ns
Min OFF Time				100		ns
Switching Frequency				500		kHz
Thermal Shutdown Temperature	$T_{SD}$			150		$^\circ C$
Thermal Shutdown Hysteresis	$T_{HYS}$			15		$^\circ C$

**Note 1:** Stresses beyond the “Absolute Maximum Ratings” may cause permanent damage to the device. These are stress ratings only. Functional operation of the device at these conditions beyond those indicated in the operational sections of the specification is not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

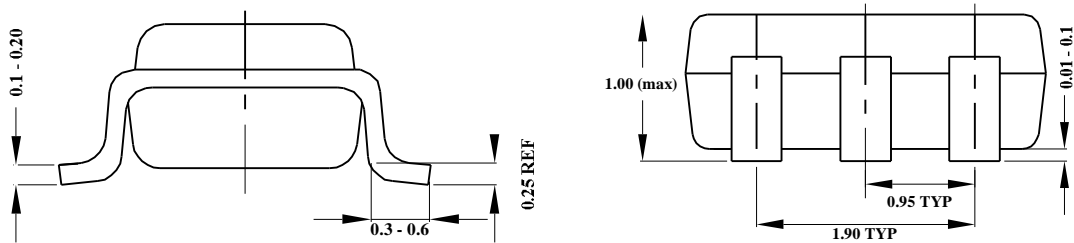
**Note 2:**  $\theta_{JA}$  is measured in the natural convection at  $T_A = 25^\circ C$  on a low effective 4-layer thermal conductivity test board of JEDEC 51-3 thermal measurement standard. Pin2 of TSOT23-6 packages is the case position for  $\theta_{JC}$  measurement.

**Note 3:** The device is not guaranteed to function outside its operating conditions

**TSOT23-6L (FC) Package outline & PCB layout**



**Recommended Pad Layout**



**Notes:** All dimension in MM  
 All dimension don't not include mold flash & metal burr