

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CC}	Supply Voltage ¹⁾	7	V
V_{out}	Output Voltage - See note 1	-0.3 to $V_{CC} + 0.3$	V
I_{out}	Output Current	20	mA
P_d	Power Dissipation ²⁾ SO8 TSSOP8	700 625	mW
T_{oper}	Operating Free Air Temperature Range	-40 to +85	°C
T_{stg}	Storage Temperature	-65 to +150	°C

1. All voltages values, except differential voltage are with respect to network ground terminal.

2. $T_j = 150^\circ\text{C}$, $T_{amb} = 25^\circ\text{C}$ with $R_{thja} = 175^\circ\text{C/W}$ for SO8 package
 $R_{thja} = 200^\circ\text{C/W}$ for TSSOP8 package

OPERATING CONDITIONS

Symbol	Parameter	Value	Unit
V_{CC}	Supply Voltage	1.5 to 5.5	V
T_{oper}	Operating Free Air Temperature Range	-40 to +85	°C

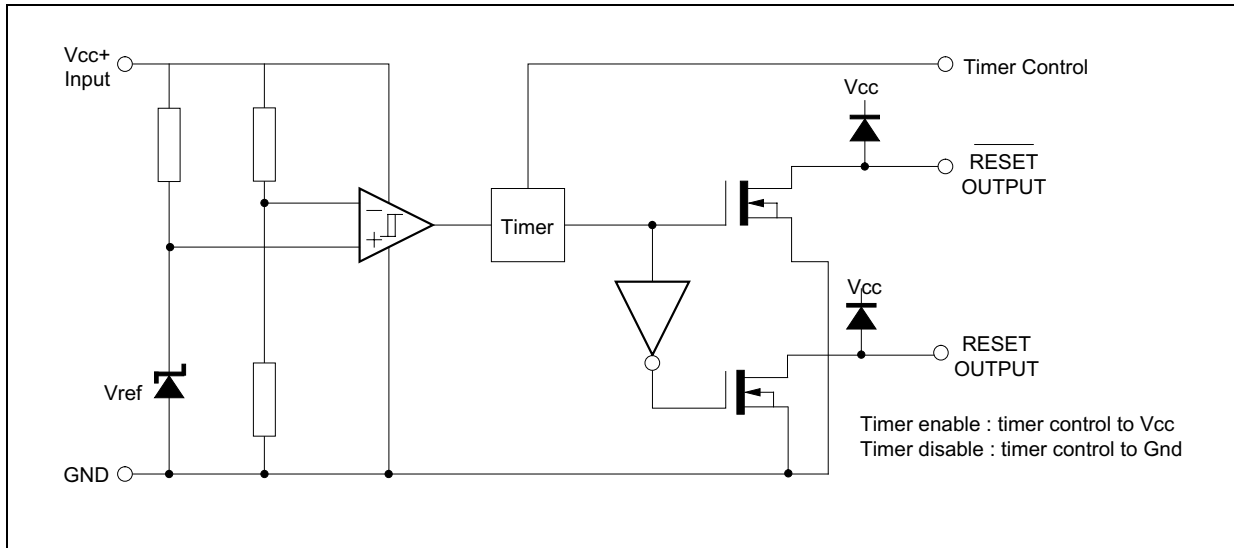
TS834-5

ELECTRICAL CHARACTERISTICS $T_{amb} = 25^\circ\text{C}$ (unless otherwise specified)

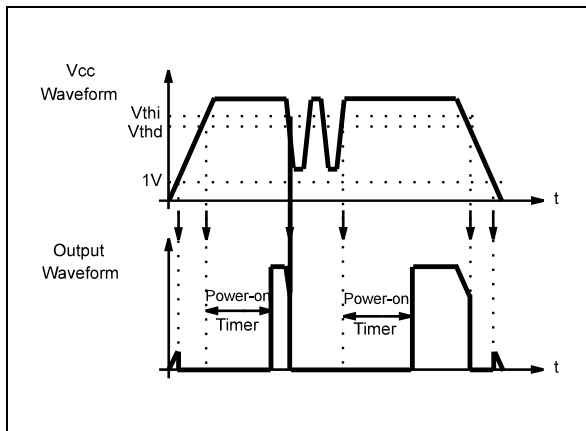
Symbol	Parameter	Min.	Typ.	Max.	Unit
V_{thi}	Threshold Voltage - V_{CC} Increasing $T_{amb} = 25^\circ\text{C}$ $-40^\circ\text{C} \leq T_{amb} \leq +85^\circ\text{C}$	4.10	4.33	4.46	V
V_{thd}	Threshold Voltage - V_{CC} Decreasing $T_{amb} = 25^\circ\text{C}$ $-40^\circ\text{C} \leq T_{amb} \leq +85^\circ\text{C}$	4.10	4.23	4.46	V
V_{hys}	Hysteresis Voltage	50	100	200	mV
I_{CC}	Current Consumption $V_{CC} = 5V$			12	μA
V_{OL1}	Low Level Output Voltage (OUTPUT 1) $V_{CC} = 4V$, $I_{OL} = 8\text{mA}$ $-40^\circ\text{C} \leq T_{amb} \leq +85^\circ\text{C}$		450	800 1000	mV
V_{OL2}	Low Level Output Voltage (OUTPUT 2) $V_{CC} = 5V$, $I_{OL} = 8\text{mA}$ $-40^\circ\text{C} \leq T_{amb} \leq +85^\circ\text{C}$		450	800 1000	mV
I_{OH1}	Low Level Output Voltage (OUTPUT 1) $V_{CC} = 5V$ $-40^\circ\text{C} \leq T_{amb} \leq +85^\circ\text{C}$		2	40 1000	nA
I_{OH2}	Low Level Output Voltage (OUTPUT 2) $V_{CC} = 4V$ $-40^\circ\text{C} \leq T_{amb} \leq +85^\circ\text{C}$		2	40 1000	nA
t_{phl}	Response Time High to Low $R_L = 10\text{k}\Omega$, $C_L = 15\text{pF}$, $V_{CC} = V_{thd} - 10\text{mV}$		20		μs
t_{rst}	Reset Pulse width (Timer enabled) $-40^\circ\text{C} \leq T_{amb} \leq +85^\circ\text{C}$	125	300	500	ms

TIMING DIAGRAMS

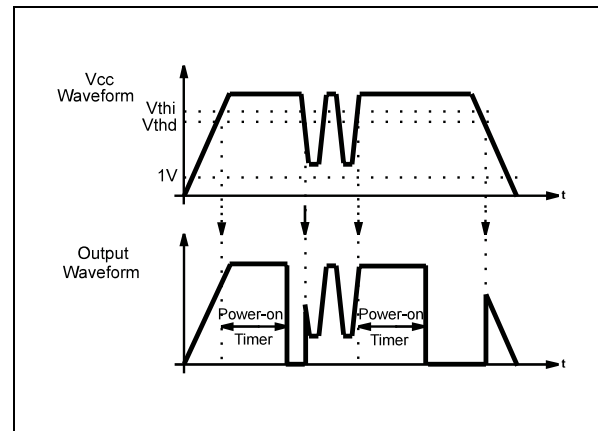
All the timing diagrams are given with outputs loaded by 10 k Ω resistors to V_{CC}



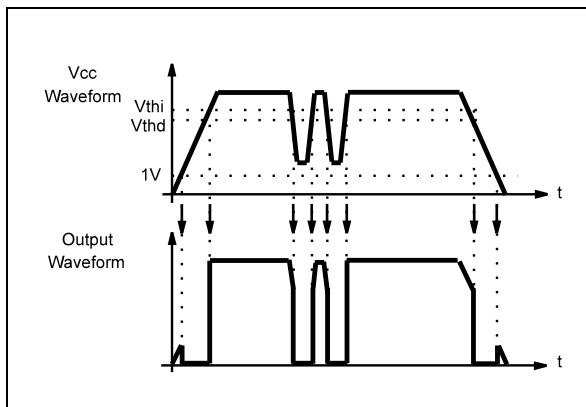
Active Low Reset, Timer Enabled



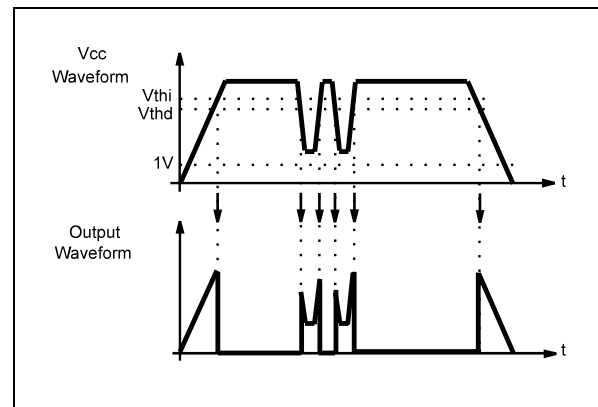
Active High Reset, Timer Enabled



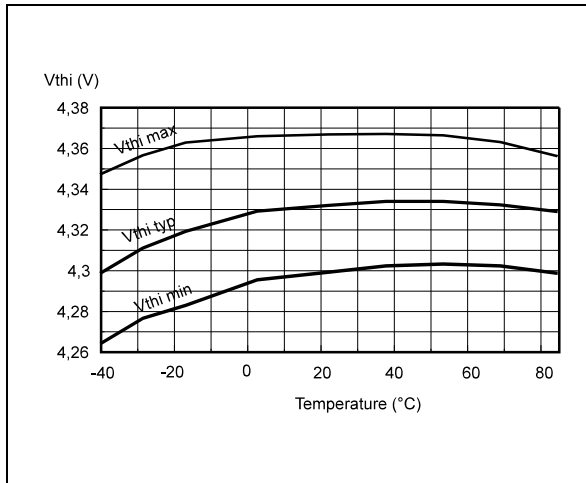
Active Low Reset, Timer Disabled



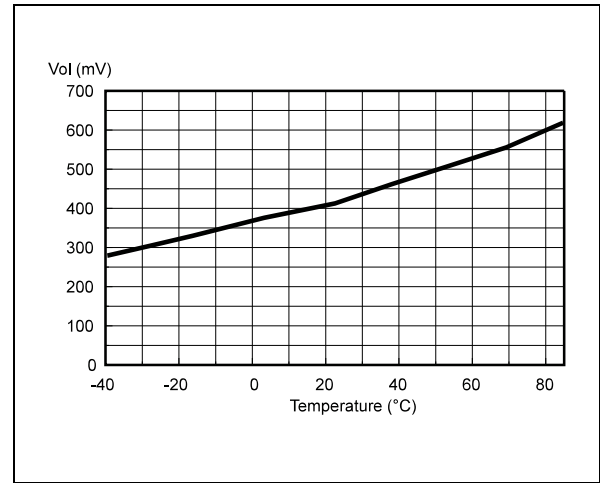
Active High Reset, Timer Disabled



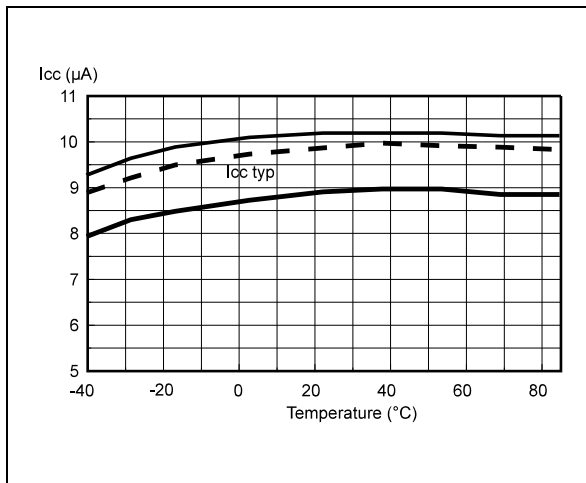
Voltage Threshold (Vthi) vs Temperature



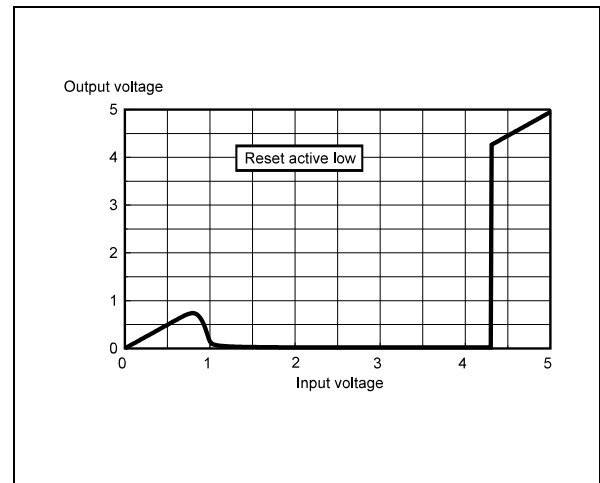
Vol vs Temperature



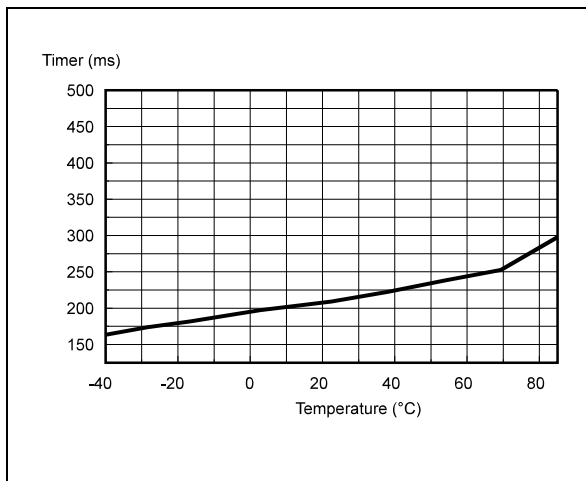
Current Consumption vs Temperature



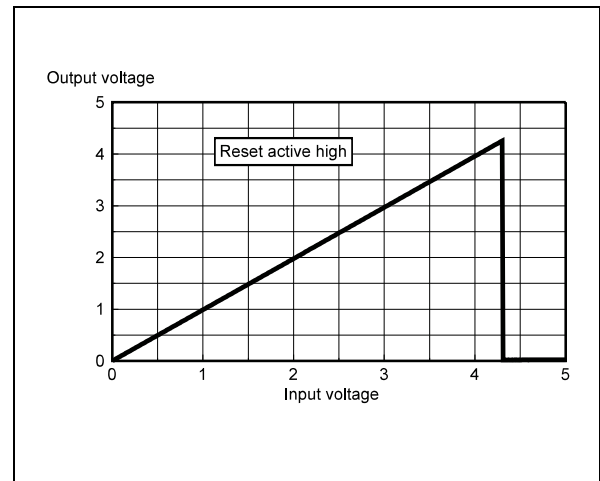
Output Voltage vs Input



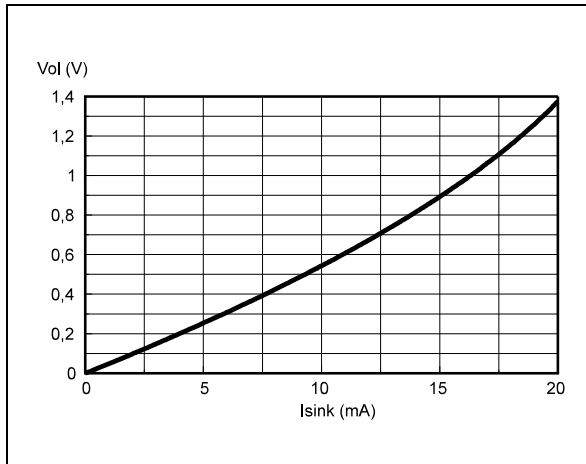
Timer Period (trst) vs Temperature



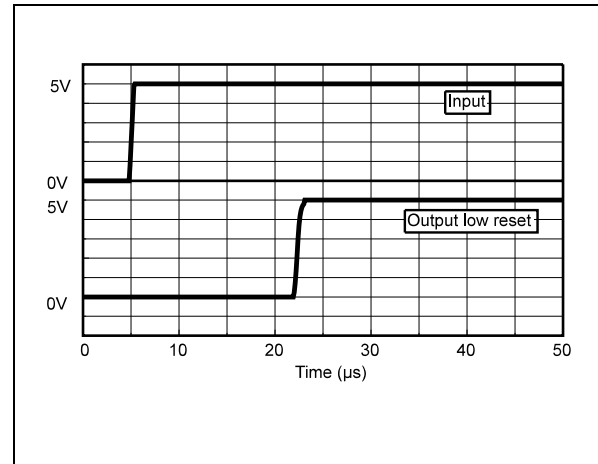
Output Voltage vs Input



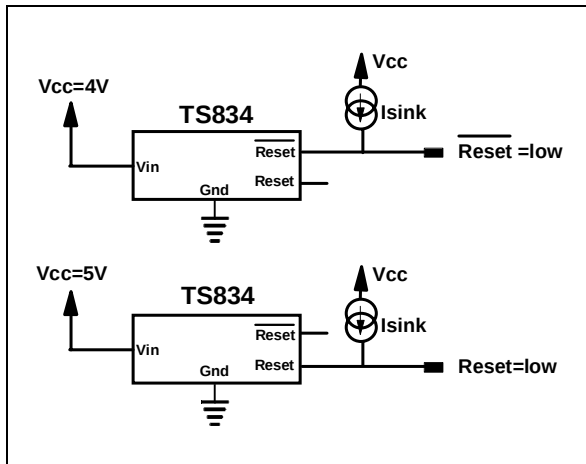
Vol vs Isink



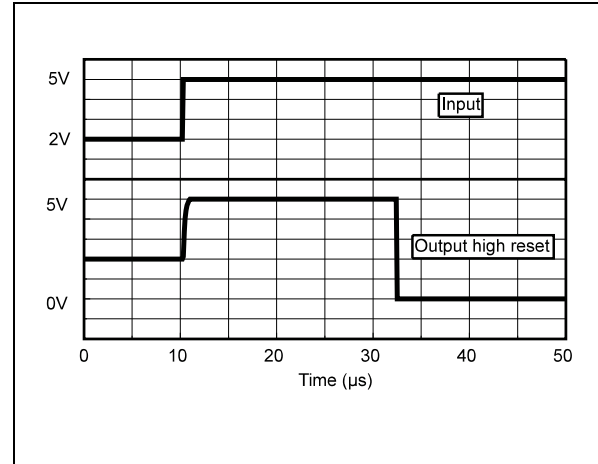
Reset High After V_{CC} Transition (timer disabled)



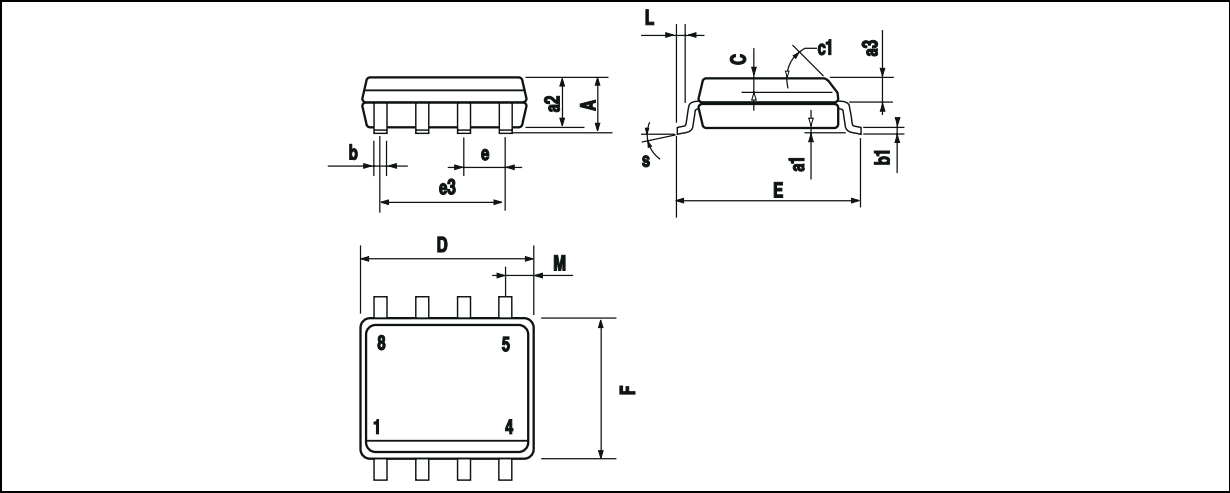
Schematic to Measure Vol vs Isink



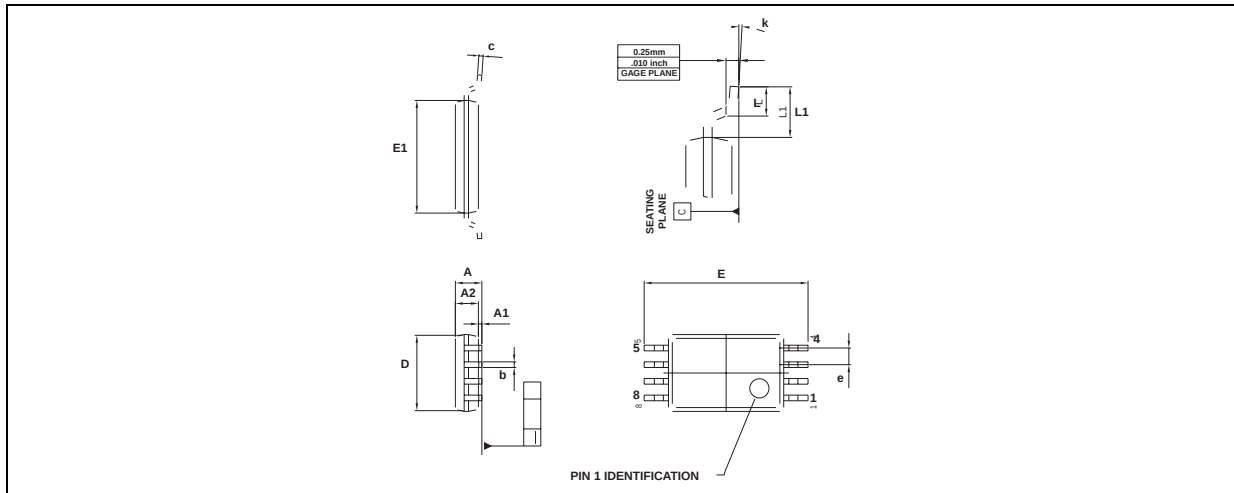
Reset Low After V_{CC} Transition (timer disabled)



PACKAGE MECHANICAL DATA
8 PINS - PLASTIC MICROPACKAGE (SO)



Dim.	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A			1.75			0.069
a1	0.1		0.25	0.004		0.010
a2			1.65			0.065
a3	0.65		0.85	0.026		0.033
b	0.35		0.48	0.014		0.019
b1	0.19		0.25	0.007		0.010
C	0.25		0.5	0.010		0.020
c1	45° (typ.)					
D	4.8		5.0	0.189		0.197
E	5.8		6.2	0.228		0.244
e		1.27			0.050	
e3		3.81			0.150	
F	3.8		4.0	0.150		0.157
L	0.4		1.27	0.016		0.050
M			0.6			0.024
S	8° (max.)					

PACKAGE MECHANICAL DATA**8 PINS - THIN SHRINK SMALL OUTLINE PACKAGE**

Dim.	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A			1.20			0.05
A1	0.05		0.15	0.01		0.006
A2	0.80	1.00	1.05	0.031	0.039	0.041
b	0.19		0.30	0.007		0.15
c	0.09		0.20	0.003		0.012
D	2.90	3.00	3.10	0.114	0.118	0.122
E		6.40			0.252	
E1	4.30	4.40	4.50	0.169	0.173	0.177
e		0.65			0.025	
k	0°		8°	0°		8°
l	0.50	0.60	0.75	0.09	0.0236	0.030
L	0.45	0.600	0.75	0.018	0.024	0.030
L1		1.000			0.039	

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