

MD70XX 系列是使用 CMOS 技术开发的低电压检测集成电路。具有高精度电压检测和超低功耗的特点。

The MD70XX series is a family of Low Voltage Detector, developed using CMOS technology. These ICS perform with high accuracy detector threshold and Ultra-low supply current consumption

产品特点 Features:

- 超低功耗电流      典型值 1.2uA
- 宽工作电压范围    1.5V~15V
- 高精度电压值检测   ±3%
- 低温漂检测电压    典型值 ±50ppm/°C
- Ultra-low supply current
- wide range of operation voltage
- high accuracy detector threshold
- low temperature\_drift coefficient of detector threshold

产品选录: Selection table

型号(Part NO.)	检测电压 (Detector voltage)	回差宽度 (Hysteresis with)	误差(Tolerance)
MD7015	1.5 V	0.075 V	±3%
MD7019	1.9 V	0.095 V	±3%
MD7021	2.1 V	0.105 V	±3%
MD7022	2.2 V	0.11 V	±3%
MD7024	2.4V	0.12 V	±3%
MD7027	2.7V	0.135V	±3%
MD7028	2.8V	0.140V	±3%
MD7030	3.0V	0.150V	±3%
MD7033	3.3V	0.165V	±3%
MD7039	3.9V	0.195V	±3%
MD7042	4.2V	0.21 V	±3%
MD7044	4.4V	0.22 V	±3%
MD7050	5.0V	0.25V	±3%
MD7070	7.0V	0.35V	±3%

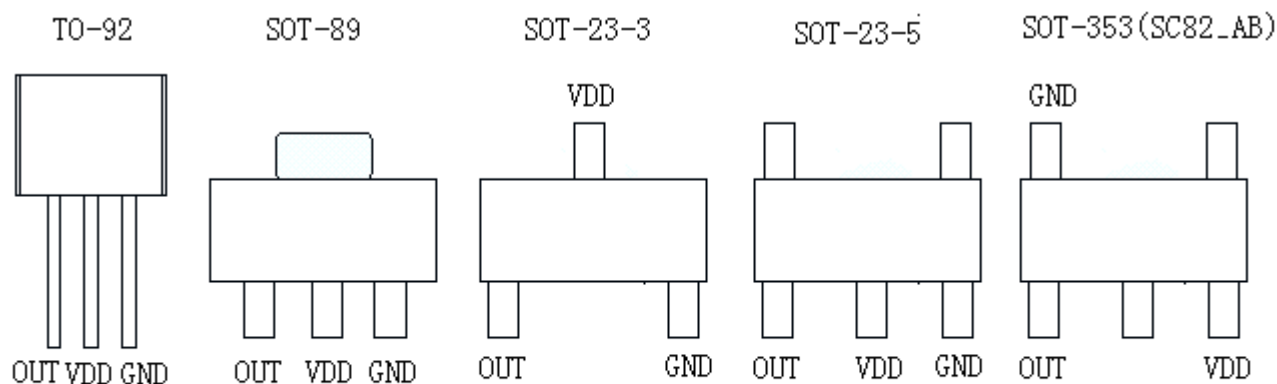
注: (一):可提供客户半定制产品, 选择范围 1.5~9V 每 0.1V 步进细分。

Note: for semi-custom parts selectable output voltage from 1.5~9V in 0.1v increment

(二): 可提供客户**检测电压误差 ±2%** 产品选择.

Note: Custom can select Detector voltage tolerance ±2% product.

封装型式和管脚 (Package and pin assignment)



## ■ 绝对最大额定值 **Absolute Maximum Ratings:**

(除特殊注明以外:  $T_a=25^{\circ}\text{C}$ )

$T_a=25^{\circ}\text{C}$  unless otherwise specified

项目 Item	记号 Symbol	绝对最大额定值 <b>Absolute Maximum Ratings</b>	单位
电源电压 Supply voltage	$V_{DD}$	18	V
输出电压 Output voltage	$V_{OUT}$	$GND-0.3 \sim V_{IN}+0.3$	
容许功耗 Power dissipatit	$P_D$	250	mW
工作周围温度范围 Operation temperature range	$T_{opr}$	$-40 \sim +85$	$^{\circ}\text{C}$
保存周围温度范围 Storage temperature range	$T_{stg}$	$-40 \sim +125$	

## 电气特性 **Electrical Characteristics:**

项目 ITEM	记号 SYMBOL	条件 CONDITIONS	型号 PART NO.	最小值 MIN	典型值 TYPE	最大值 MAX	单位 UNITS
检测电压 Detectable voltage	V <sub>DET</sub>	R <sub>L</sub> =4.7K	MD7015	1.455	1.5	1.545	V
			MD7019	1.843	1.9	1.957	
			MD7021	2.037	2.1	2.163	
			MD7022	2.134	2.2	2.266	
			MD7024	2.328	2.4	2.772	
			MD7027	2.619	2.7	2.781	
			MD7028	2.716	2.8	2.884	
			MD7030	2.910	3.0	3.090	
			MD7033	3.201	3.3	3.399	
			MD7039	3.783	3.9	4.017	
			MD7042	4.074	4.2	4.326	
			MD7044	4.268	4.4	4.532	
			MD7050	4.850	5.0	5.150	
MD7070	6.790	7.0	7.210				
电压回差宽度 Hysteresis with	V <sub>HYS</sub>	R <sub>L</sub> =4.7K	MD7015	0.030	0.075	0.105	V
			MD7019	0.038	0.095	0.133	
			MD7021	0.042	0.105	0.147	
			MD7022	0.044	0.110	0.154	
			MD7024	0.048	0.120	0.168	
			MD7027	0.054	0.135	0.189	
			MD7028	0.056	0.140	0.196	
			MD7030	0.060	0.150	0.210	
			MD7033	0.066	0.165	0.231	
			MD7039	0.078	0.195	0.273	
			MD7042	0.084	0.210	0.294	
			MD7044	0.088	0.220	0.308	
			MD7050	0.100	0.250	0.350	
MD7070	0.140	0.350	0.490				
电源电流 Supply current	I <sub>SS</sub>	空载 no load	--		1.2	2	uA
工作电压 Operation voltage	V <sub>DD</sub>		--	1.5		15	V
输出电流 Output current	I <sub>OUT</sub>	V <sub>OUT</sub> =0.3V	V <sub>DET</sub> <3V	1	2	--	mA
			V <sub>DET</sub> >3V	2	4	--	
检测电压温漂 Detector Voltage Threshold Temperation coefficient	$\frac{\Delta V_{DET}}{\Delta ^\circ C}$	-40 $^\circ C$ ≤ Ta ≤ 85 $^\circ C$	--	--	±50	±100	ppm/ $^\circ C$

**基本应用电路**

**Application Circuits:**

