BMR - 0301

BMR – 0301 is the low reset type of IC that guarantee to set againmicro computers or logic systems by detecting the intermittent of fluctuating power supply voltage during normal use or switching on/off of theequipments.

A comparator type of hysteresis transistor developed by KODENSHI is built in the IC,so that BMR – 0301 is very cost effective components. And,BMR– 0301 is a super – low consumption electric current system reset IC which has been developed with using high resistance process.

FEATURES

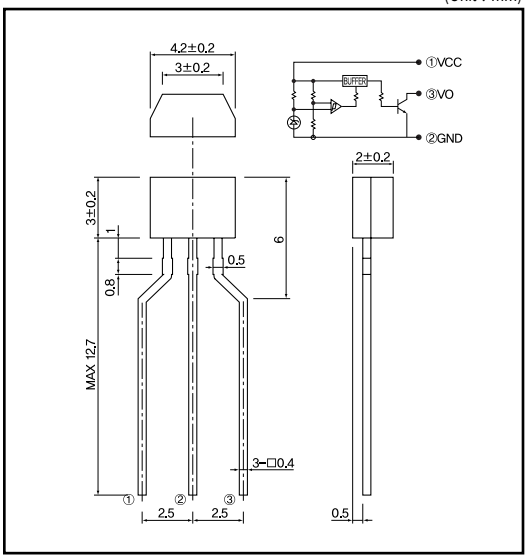
- Super– low current consumption
- Low operation voltage
- High current of output transistor
- Hysteresis circuit built in
- It has on delay function to supplement the constant of outer C and R

APPLICATIONS

- Micro computer circuits in mobile phones,word processors, TVs,VCRs etc.
- General logic circuits
- Detection of voltage drop in batteries of note personal computers mobile phones
- Switching to backup power supply

DIMENSIONS

(Unit : mm)



MAXIMUM RATINGS

(Ta=25℃)

Item	Symbol	Rating	Unit
Supply voltage	V_{CC}	- 0.3~ + 10.0	V
Power dissipation	P_D	200	mW
Operating temp.	Topr.	- 20~ + 75	℃
Storage temp.	Tstg	- 40~ + 125	℃
Soldering temp.*1	Tsol.	260	℃

*1.5sec at location of 2mm away from lead bottom.

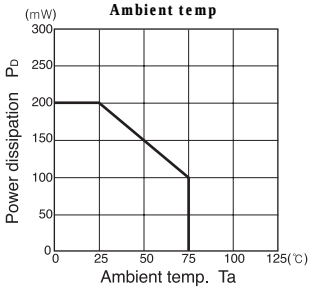
ELECTRO-OPTICAL CHARACTERISTICS

(V_{CC}=5V, Ta=25℃)

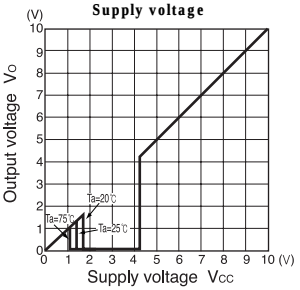
Item		Symbol	Conditions	Min.	Typ.	Max.	Unit.
Detecting Voltage	BMR - 0301C	V_S	R_L =470 Ω,V_{CC} =H →L,V_{OL} ≦0.4V	4.3	4.5	4.7	V
	BMR - 0301D			4.0	4.2	4.4	
	BMR - 0301E			3.7	3.9	4.1	
	BMR - 0301F			3.4	3.6	3.8	
	BMR - 0301G			3.1	3.3	3.5	
	BMR - 0301H			2.9	3.1	3.3	
	BMR - 0301I			2.75	2.9	3.05	
	BMR - 0301J			2.55	2.7	2.85	
	BMR - 0301K			2.35	2.5	2.65	
	BMR - 03 01L			2.15	2.3	2.45	
Hysteresis voltage		△V_S	R_L =470 Ω,V_{CC} =L →H →L	40	100	300	mV
Temperature coefficient of detecting voltage		V_S /△T	R_L =470 Ω,Ta= – 20 ~75 ℃	-	±0.01	-	%/℃
Low level output voltage		V_{OL}	R_L =470 Ω,V_{CC} =V_S Min.	-	0.1	0.4	V
Circuit current at ON		I_{CCL}	R_L =∞Ω,V_{CC} =V_S Min.	-	100	180	μA
Circuit current at OFF		I_{CCH}	R_L =∞Ω,V_{CC} =V_S Max+0.1V	-	1.0	2.5	μA
Threshold operating voltage		V_{OPL}	R_L =4.7k Ω,V_{OL} ≦0.4V	-	1.4	1.6	V
Output current at ON 1		I_{OL} 1	R_L =0 Ω,V_{CC} =V_S Min.	10	20	-	mA
Output current at ON 2		I_{OL} 2	R_L =0 Ω,Ta= – 20 ~75 ℃	5	-	-	mA
Transmission delay time		t_{PLH}	R_L =4.7k Ω,C_L =100pF	-	100	500	μsec
Transmission delay time		t_{PHL}	R_L =4.7k Ω,C_L =100pF	-	10	20	μsec

BMR - 0301

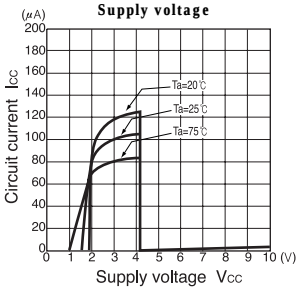
Power dissipation Vs. Ambient temp



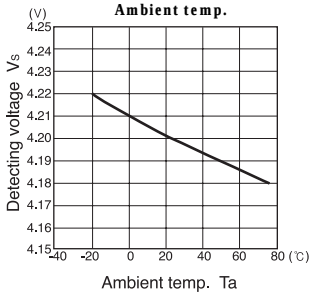
Output voltage Vs. Supply voltage



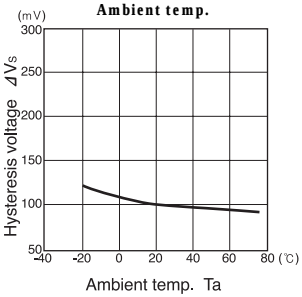
Citcuit current Vs. Supply voltage



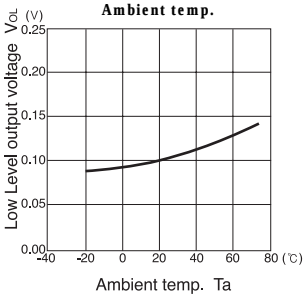
Detecting voltage Vs. Ambient temp.



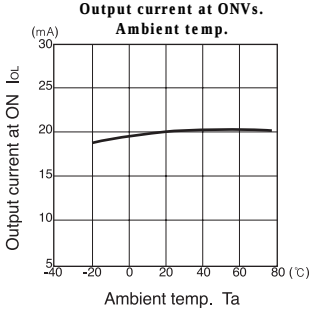
Hysteresis voltage Vs. Ambient temp.



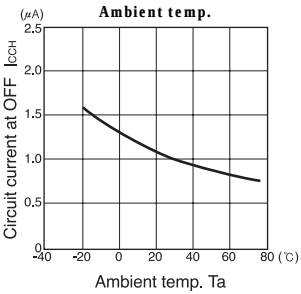
Low Level output voltage Vs. Ambient temp.



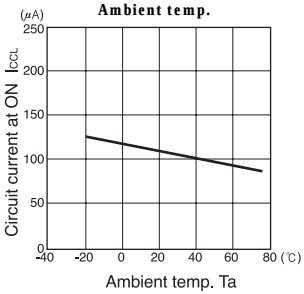
Output current at ONVs. Ambient temp.



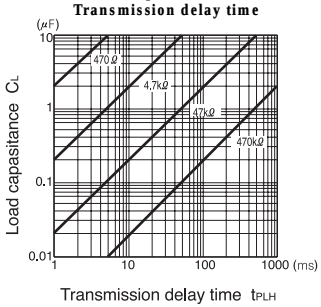
Circuit current at OFF Vs. Ambient temp.



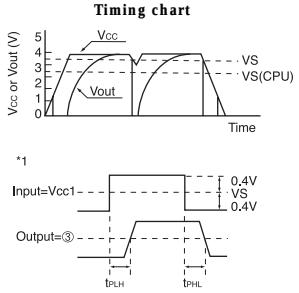
Circuit current at ON Vs. Ambient temp.

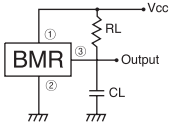


Load capasitance Vs. Transmission delay time



Timing chart





Vcc : V
VScpu : Reset threshold voltage of CPU,MPU
CL : μF
RL : kΩ
Caution) It is desirable that Capacitor be built between ① and ② terminal when high impedence of Vcc line, unstable power line or high ripple occurence to expected.