

# G2 Series/ 1A/1B

## Solid State Relays



### Model Number

### Parameters

### Input Characteristics

LED Forward Current - Turn on

LED Forward Current - Turn off

Recommended Forward Current

LED Forward Voltage

### Maximum Input Ratings

LED Forward Current

LED Reverse Voltage Withstand

### Output Characteristics

Switching Voltage

Switching Current

Current Limit: N.O. Channel Only

On Resistance

Off State Resistance: N.O. Channel

Off State Resistance: N.C. Channel

Off State Leakage: N.O. Channel

Off State Leakage: N.C. Channel

Turn On Time

Turn Off Time

Thermal Offset Voltage

### General Characteristics

Dielectric Strength - Input to Output

Capacitance - Input to Output

Power Dissipation

Model Number	Sym.	Test Conditions	Units		G2-AB01 1A/1B	G2-AB02 1A/1B
LED Forward Current - Turn on	$I_{Fon}$	$I_L = 100mA, t = 10ms$	mADC	Max Typ	5.0 2.0	5.0 2.0
LED Forward Current - Turn off	$I_{Foff}$	$I_L = 0.2mA, V_L = (Note 1)$	mADC	Min Typ	0.1 1.8	0.1 1.8
Recommended Forward Current	$I_F$		mADC	Min Max	10 30	10 30
LED Forward Voltage	$V_F$	$I_F = 20mA$	VDC	Min Max	1.1 1.4	1.1 1.4
LED Forward Current	$I_F$		mADC	Max	50	50
LED Reverse Voltage Withstand	$V_R$	$I_R = 10mA$	VDC	Max	10	10
Switching Voltage	$V_L$	$I_L = 50mA$	V PEAK	Max	400	250
Switching Current	$I_L$	Each Channel Both Ch.'s Simultaneously	mA	Max Max	150 110	200 150
Current Limit: N.O. Channel Only	$I_{Lmt}$	$I_F = 5mA, t = 5ms$	mA	Typ	380	380
On Resistance	$R_{on}$	$I_F = 5mA/0mA, I_L = 50mA$	W	Max	24	13
Off State Resistance: N.O. Channel	$R_{off}$	$I_F = 0mA, V_L = 100V$	GW	Min Typ	0.5 5000	0.5 5000
Off State Resistance: N.C. Channel	$R_{off}$	$I_F = 5mA, V_L = 100V$	GW	Min Typ	0.5 5000	0.5 5000
Off State Leakage: N.O. Channel	$I_{off}$	$I_F = 0mA, V_L = 100V$	nA	Max	200	200
	$I_{off}$	$I_F = 0mA, V_L = Max$	mA	Typ Max	0.17 1	0.17 1
Off State Leakage: N.C. Channel	$I_{off}$	$I_F = 5mA, V_L = 100V$	mA	Max	0.02	0.02
	$I_{off}$	$I_F = 5mA, V_L = Max$	mA	Typ Max	1 1	1 1
Turn On Time	$T_{on}$	$I_F = 5mA, I_L = 50mA$	ms	Max	5.0	5.0
Turn Off Time	$T_{off}$	$I_F = 5mA, I_L = 50mA$	ms	Max	1.0	1.0
Thermal Offset Voltage		$I_F = 5mA$	mV	Typ	0.2	0.2
Dielectric Strength - Input to Output		$t = 60sec$	VRMS	Min	3750	3750
Capacitance - Input to Output			pF	Typ	1.2	1.2
Power Dissipation	$P_{Diss}$		mW	Max	600	600

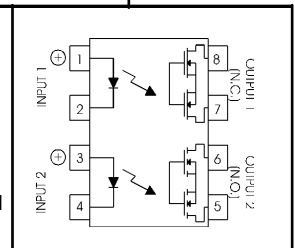
#### Notes:

1:  $V_L$  for LED Forward Current - Turn Off is 50 Volts less than "Switching Voltage Max".

2: Specifications subject to change without notice.

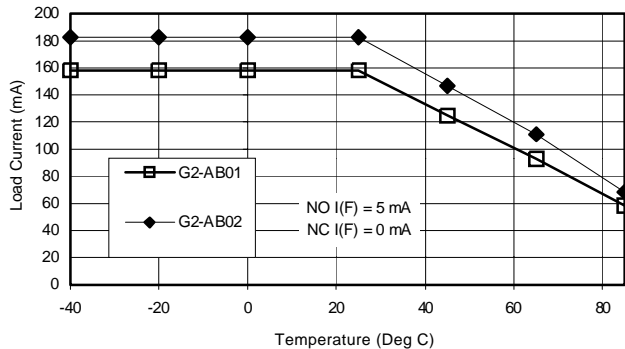
\*  $I_F = 10mA$

Schematic Top View:  
Mold mark on top of relay indicates Pin #1  
Package Drawings on Page 3

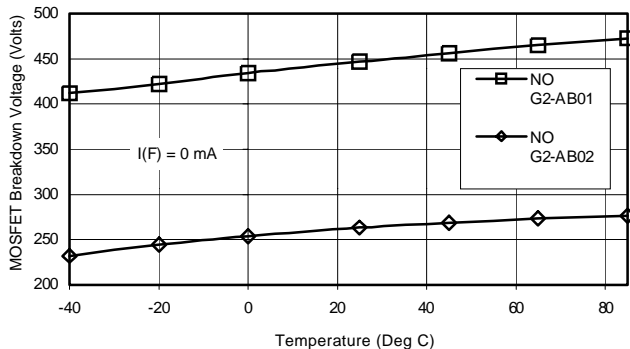


# G2 Series/ 1A/1B

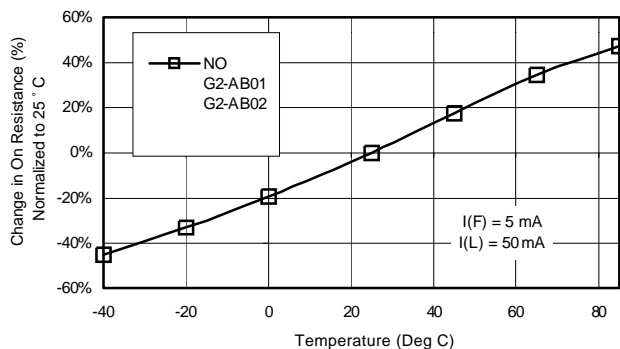
\*See page 3 for characteristic curves of normally closed switches



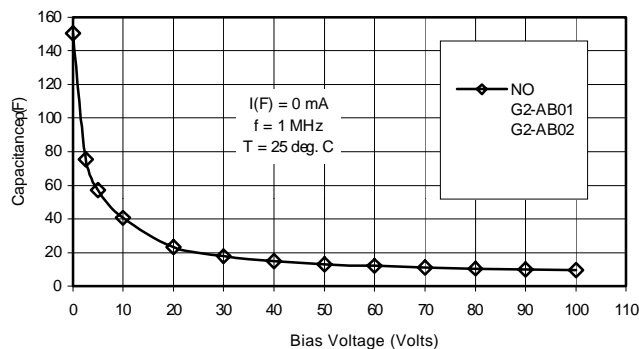
**A. Load Current vs. Ambient Temperature**



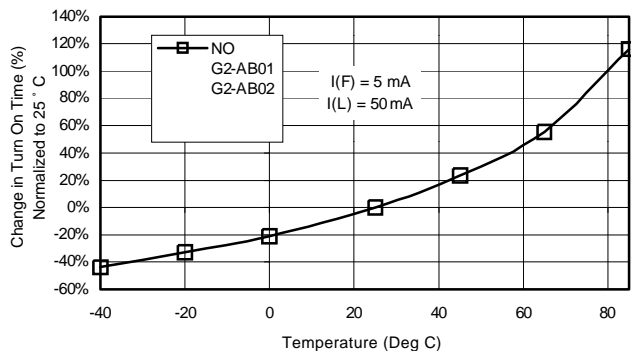
**B. Output MOSFET vs. Ambient Temperature**



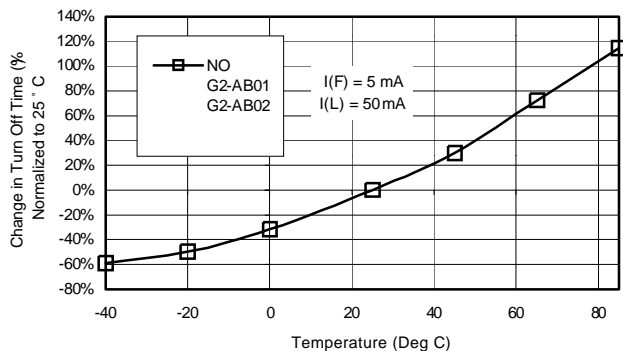
**C. On-Resistance vs. Ambient Temperature**



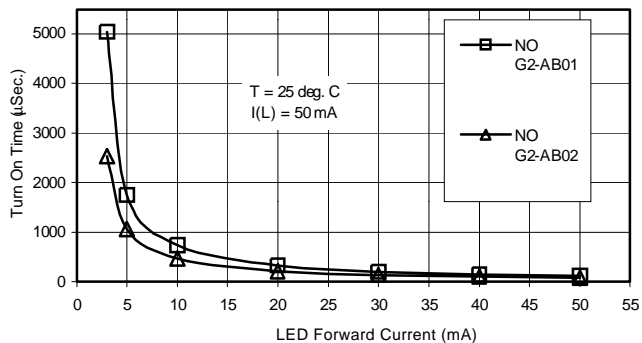
**D. Output Capacitance vs. Applied Voltage**



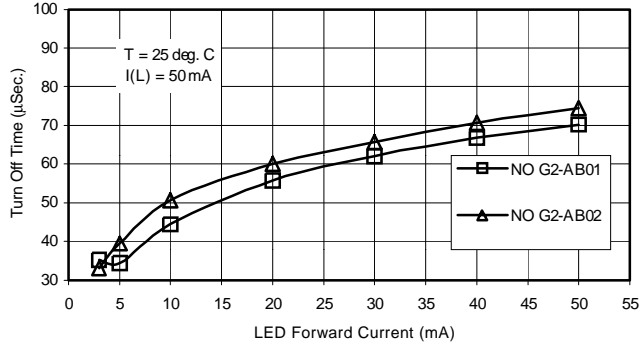
**E. On Time vs. Ambient Temperature**



**F. Turn Off Time vs. Ambient Temperature**

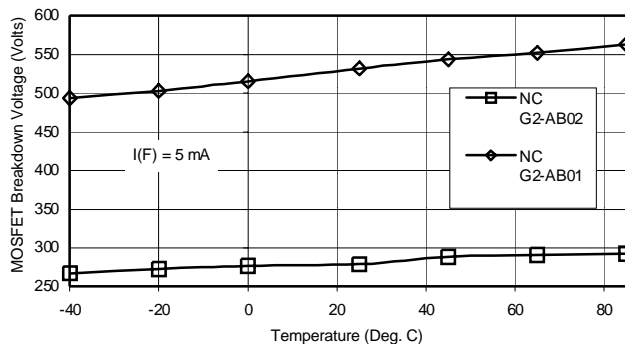


**G. Turn On Time vs. LED Forward Current**

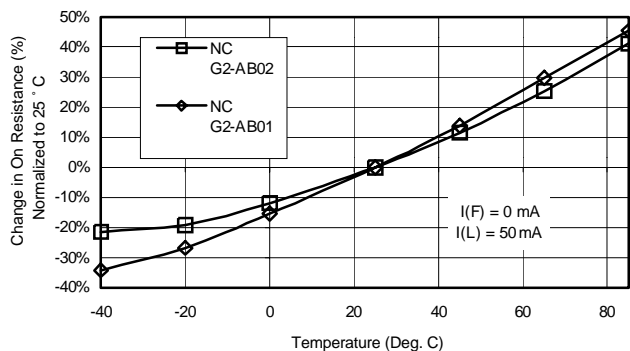


**H. Turn Off Time vs. LED Forward Current**

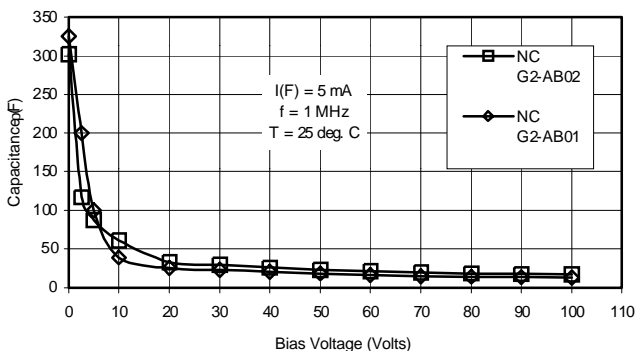
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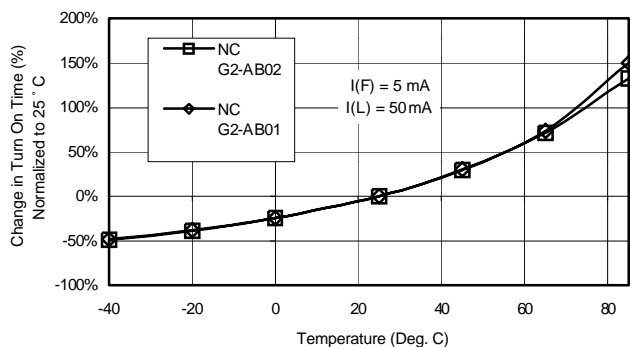
**I. Output MOSFET BV vs. Ambient Temperature**



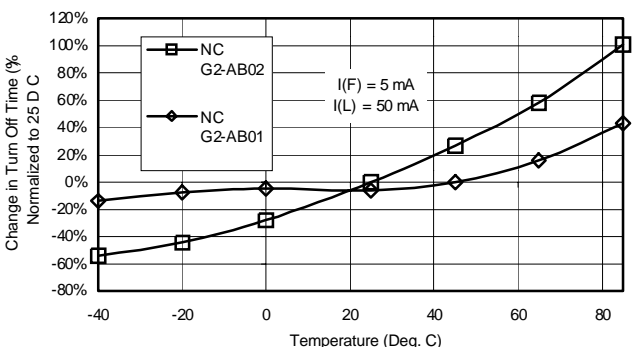
**J. On-Resistance vs. Ambient Temperature**



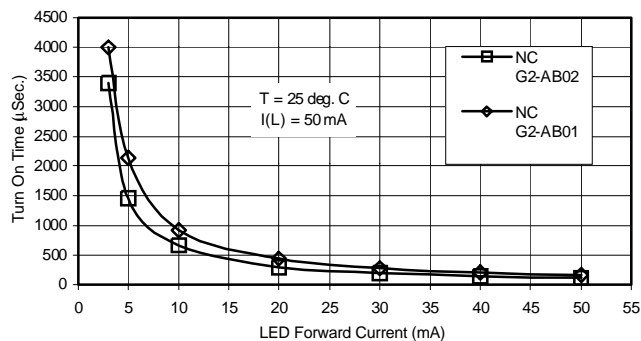
**K. Output Capacitance vs. Applied Voltage**



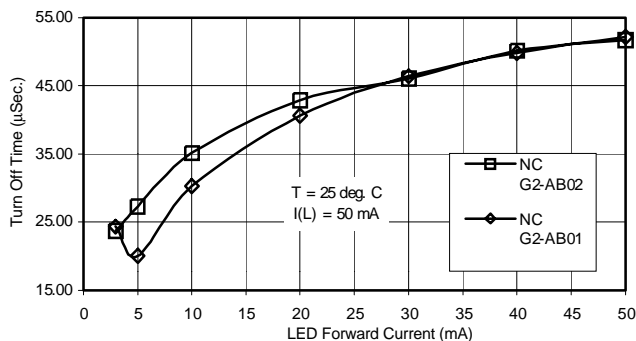
**L. On Time vs. Ambient Temperature**



**M. Turn Off Time vs. Ambient Temperature**



**N. Turn On Time vs. LED Forward Current**



**O. Turn Off Time vs. LED Forward Current**