

# G2 Series/ **FORM B**

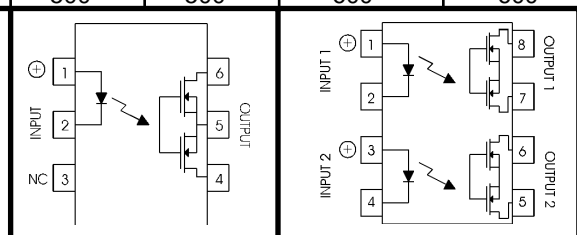
## Solid State Relays



Model Number					G2-1B01	G2-1B02	G2-DB01	G2-DB02
<b>Parameters</b>								
<b>Input Characteristics</b>	Sym.	Test Conditions	Units		1 Form B	1 Form B	Dual Form B	Dual Form B
LED Forward Current - Turn on	$I_{Fon}$	$I_L = 100mA, t = 10ms$	mADC	Max Typ	5.0 3.0	5.0 3.0	5.0 3.0	5.0 3.0
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	0.1 1.8	0.1 1.8
Recommended Forward Current	$I_F$		mADC	Min Max	10 30	10 30	10 30	10 30
LED Forward Voltage	$V_F$	$I_F = 20mA$	VDC	Min Max	1.1 1.4	1.1 1.4	1.1 1.4	1.1 1.4
<b>Maximum Input Ratings</b>								
LED Forward Current	$I_F$		mADC	Max	50	50	50	50
LED Reverse Voltage Withstand	$V_R$	$I_R = 10mA$	VDC	Max	10	10	10	10
<b>Output Characteristics</b>								
Switching Voltage	$V_L$	$I_L = 50mA$	V PEAK	Max	350	250	350	250
Switching Current	$I_L$	(Note 2) (Note 3)	mA	Max	165	200	170	200
				Max	330	400	120	140
On Resistance (Note 2)	$R_{on}$	$I_F = 0mA, I_L = 50mA$	$\Omega$	Max	20	13	20	13
On Resistance (Note 4)	$R_{on}$	$I_F = 0mA, I_L = 50mA$	$\Omega$	Max	5.0	3.25	n/a	n/a
Off State Resistance	$R_{off}$	$I_F = 5mA, V_L = 100V$	G $\Omega$	Min	0.1	0.1	0.1	0.1
				Typ	1.4	1.4	1.4	1.4
Off State Leakage	$I_{off}$	$I_F = 5mA, V_L = 100V$	$\mu A$	Max Typ	0.07 1.0	0.07 1.0	0.07 1.0	0.07 1.0
				Max	1.0	1.0	1.0	1.0
Turn On Time	$T_{on}$	$I_F = 0mA, I_L = 50mA$	ms	Max	5.0	5.0	5.0	5.0
Turn Off Time	$T_{off}$	$I_F = 5mA, I_L = 50mA$	ms	Max	1.0	1.0	1.0	1.0
Capacitance - Across Output		$I_F = 0mA, V_L = 1V$ $I_F = 0mA, V_L = 50V$	pF	Typ	200	170	200	170
				Typ	20	25	20	25
Thermal Offset Voltage		$I_F = 5mA$	$\mu V$	Typ	0.2	0.2	0.2	0.2
<b>General Characteristics</b>								
Dielectric Strength - Input to Output		$t = 60sec$	VRMS	Min	3750	3750	3750	3750
Capacitance - Input to Output			pF	Typ	0.8	0.8	1.2	1.2
Power Dissipation	$P_{Diss}$		mW	Max	500	500	600	600

### Notes:

- 1:  $V_L$  for LED Forward Current - Turn off is 50 Volts less than "Switching Voltage : Max"
- 2: For G2-1B01 and G2-1B02: Output connected to pins 4 and 6.  
For G2-DB01 and G2-DB02: Each channel.
- 3: For G2-1B01 and G2-1B02: Output connected to pin 5(-) and pins 4 & 6(+).  
For G2-DB01 and G2-DB02: Both channels switching simultaneously
- 4: For G2-1B01 and G2-1B02: Output connected to pin 5(-) and pins 4 & 6(+).
- 5: Specifications subject to change without notice



Schematic Top View:  
Mold mark on top of relay indicates Pin #1

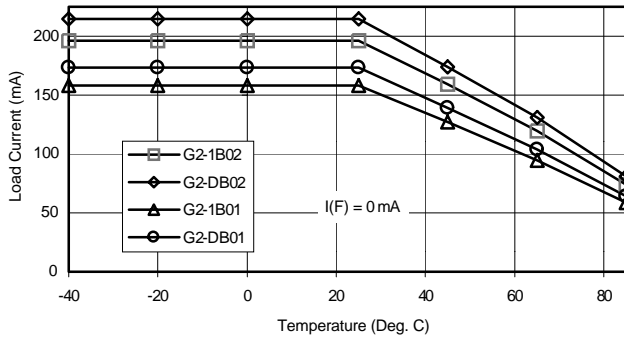
\*  $I_F = 10mA$

For recommended applications and more information contact:

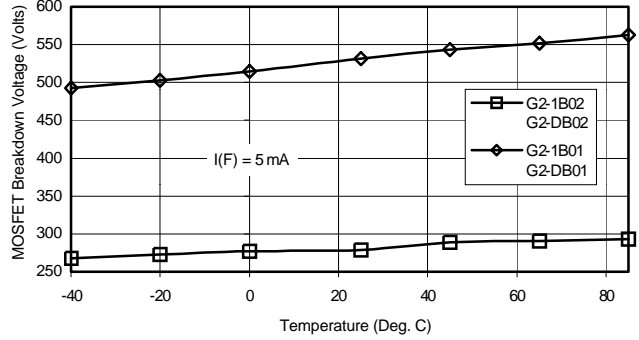
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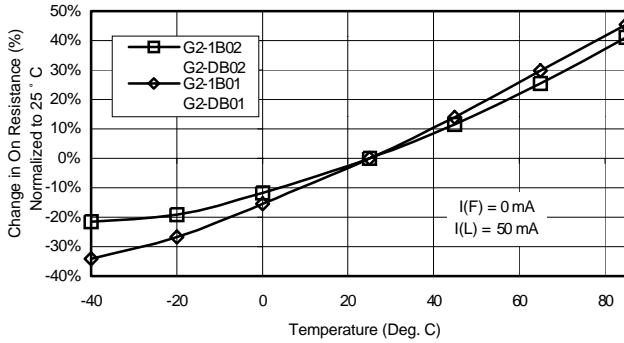
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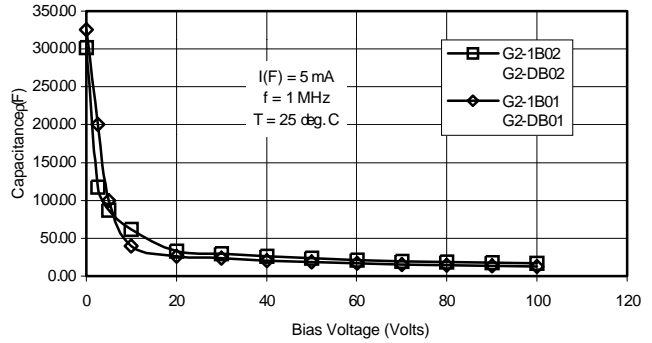
**A. Load Current vs. Ambient Temperature**



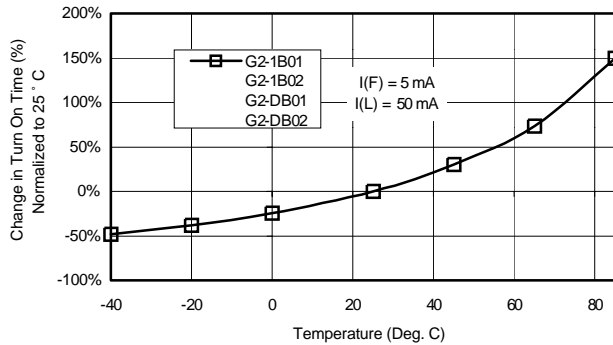
**B. Output MOSFET BV vs. Ambient Temperature**



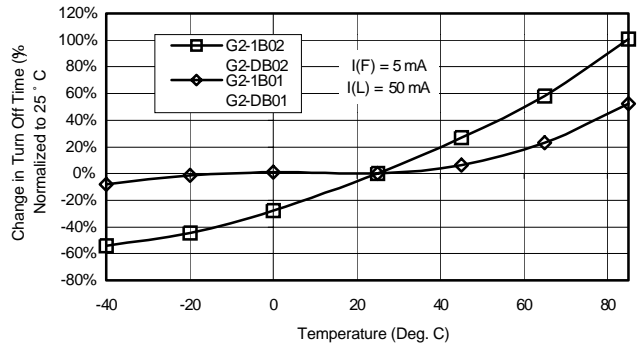
**C. On-Resistance vs. Ambient Temperature**



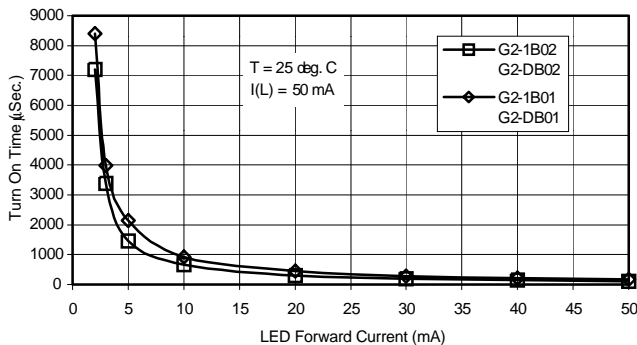
**D. Output Capacitance vs. Applied Voltage**



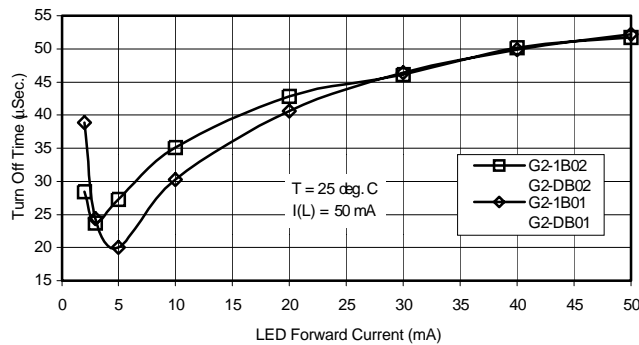
**E. On Time vs. Ambient Temperature**



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



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



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