

G2 Series/ **FORM B**

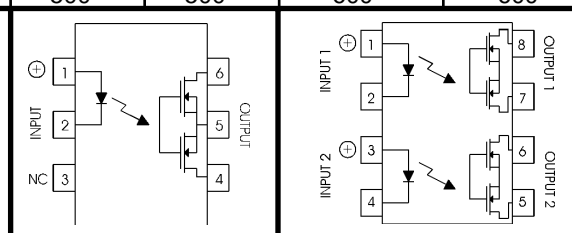
Solid State Relays



Model Number					G2-1B01	G2-1B02	G2-DB01	G2-DB02
Parameters								
Input Characteristics	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
Maximum Input Ratings								
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
Output Characteristics								
Switching Voltage	V_L	$I_L = 50mA$	V PEAK	Max	350	250	350	250
Switching Current	I_L	(Note 2) (Note 3)	mA	Max Max	165 330	200 400	170 120	200 140
On Resistance (Note 2)	R_{on}	$I_F = 0mA, I_L = 50mA$	Ω	Max	20	13	20	13
On Resistance (Note 4)	R_{on}	$I_F = 0mA, I_L = 50mA$	Ω	Max	5.0	3.25	n/a	n/a
Off State Resistance	R_{off}	$I_F = 5mA, V_L = 100V$	G Ω	Min Typ	0.1 1.4	0.1 1.4	0.1 1.4	0.1 1.4
Off State Leakage	I_{off}	$I_F = 5mA, V_L = 100V$	μA	Max Typ	0.07 1.0	0.07 1.0	0.07 1.0	0.07 1.0
	I_{off}	$I_F = 5mA, V_L = Max$	μA	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		$I_F = 0mA, V_L = 1V$	pF	Typ	200	170	200	170
		$I_F = 0mA, V_L = 50V$	pF	Typ	20	25	20	25
Thermal Offset Voltage		$I_F = 5mA$	μV	Typ	0.2	0.2	0.2	0.2
General Characteristics								
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



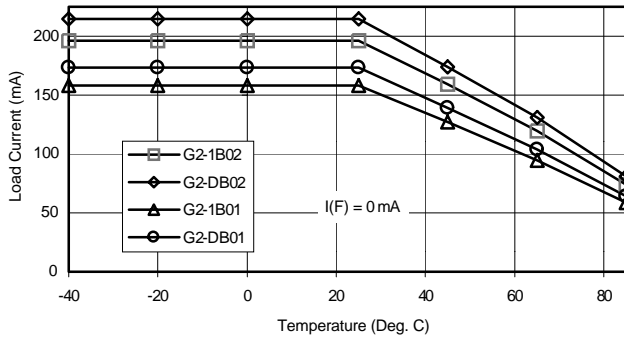
Schematic Top View:
Mold mark on top of relay indicates Pin #1

* $I_F = 10mA$

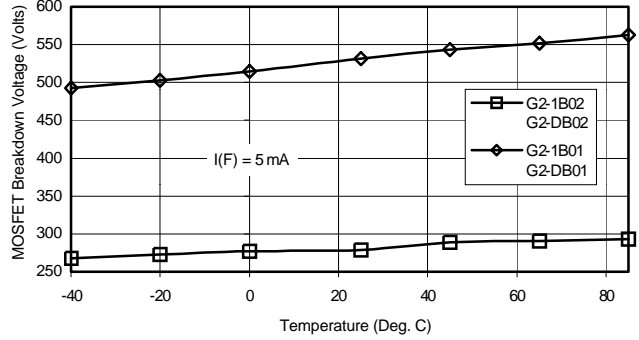
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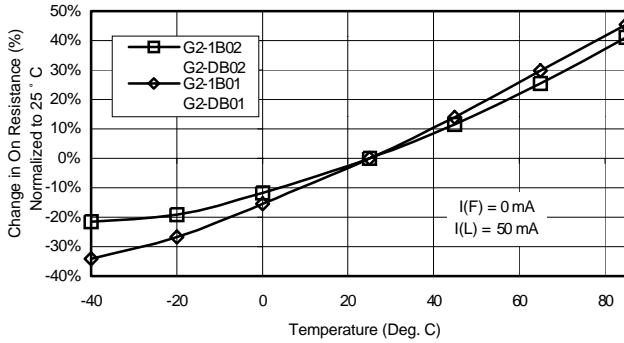
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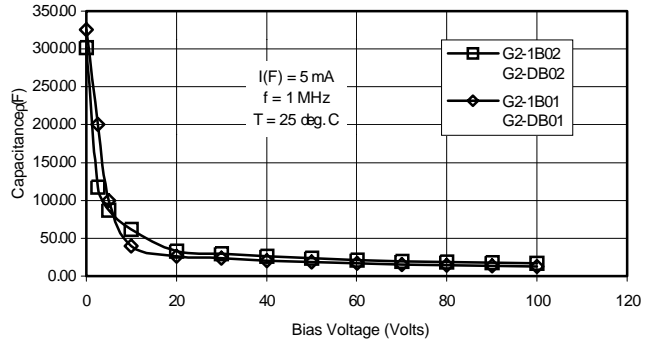
A. Load Current vs. Ambient Temperature



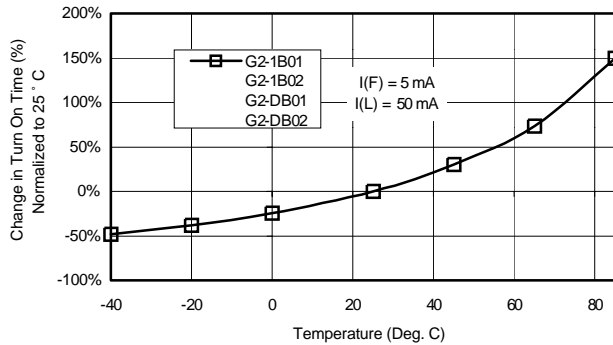
B. Output MOSFET BV vs. Ambient Temperature



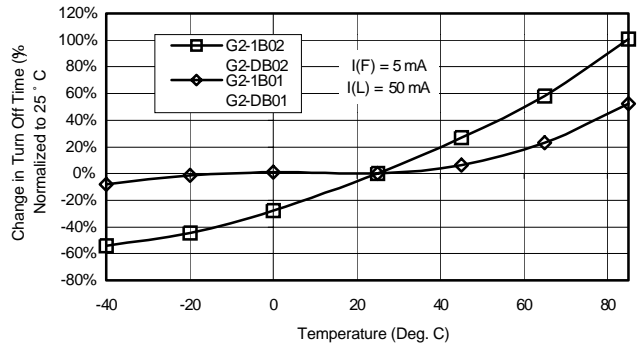
C. On-Resistance vs. Ambient Temperature



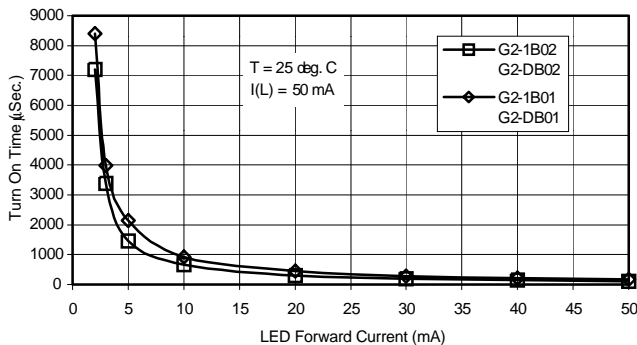
D. Output Capacitance vs. Applied Voltage



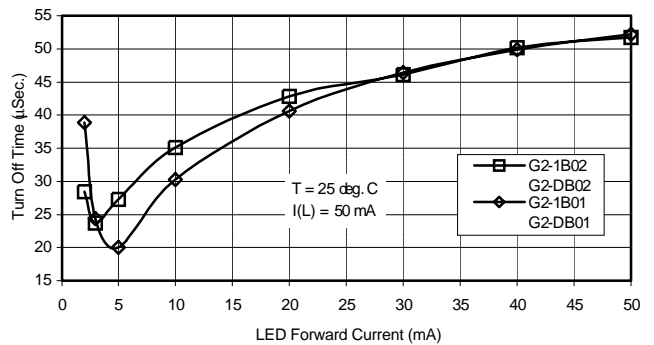
E. On Time vs. Ambient Temperature



F. Turn Off Time vs. Ambient Temperature



G. Turn On Time vs. LED Forward Current



H. Turn Off Time vs. LED Forward Current