



Title of Change:	Update datasheet for adding the dependent on switching time characteristics and input pulse width.
Effective date:	15 December 2016
Contact information:	Contact your local ON Semiconductor Sales Office or <Osamu Akaki@onsemi.com>
Type of notification:	ON Semiconductor will consider this change accepted.
Change category:	☐ Wafer Fab Change ☐ Assembly Change ☐ Test Change ☒ Other Datasheet Update

Change Sub-Category(s):☐ Manufacturing Site Change/Addition☐ Material Change☒ Datasheet/Product Doc change☐ Manufacturing Process Change☐ Product specific change☐ Shipping/Packaging/Marking☐ Other: _____**Sites Affected:**☒ All site(s)☐ not applicable☐ ON Semiconductor site(s) :☐ External Foundry/Subcon site(s)**Description and Purpose:**

This Product Bulletin updates the datasheet in order to add characteristics suitable for the customer's application use.

Updating this datasheet does not change other characteristics of the current datasheet.

Add the following 4 points

- 1) Switching time $PW > 10ms$ value. (Page.2)
- 2) Switching time circuit of $PW > 10ms$. (Page.2)
- 3) Note 3 : The fall switching time is dependent on the input pulse width. (Page.2)
- 4) Dependency graph of switching time and input pulse width. (Page.3)

The below examples are ECH8693R-TL-W.

Turn-ON Delay Time	$t_{d(on)}$	See Fig. 1 (Note 3)	545	ns
Rise Time	t_r		525	ns
Turn-OFF Delay Time	$t_{d(off)}$		18.65	μs
Fall Time	t_f	See Fig. 2 (Note 3)	22.2	μs
Turn-ON Delay Time	$t_{d(on)}$		545	ns
Rise Time	t_r		525	ns
Turn-OFF Delay Time	$t_{d(off)}$		1,130	μs
Fall Time	t_f		410	μs
Total Gate Charge	Q_g		13	nC
Gate to Source Charge	Q_{gs}	$V_{DS} = 10V, V_{GS} = 4.5V, I_D = 14A$	3	nC
Gate to Drain "Miller" Charge	Q_{gd}		2.4	nC
Forward Diode Voltage	V_{SD}		0.78	1.2 V

Note 2 : Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted.
 Grouped performance may not be indicated by the Electrical Characteristics if operated under different conditions.

Note 3 : The fall switching time is dependent on the input pulse width.

Fig.1 Switching Time Test Circuit 1

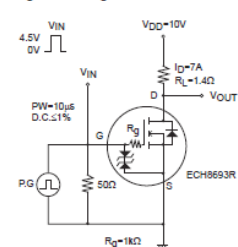
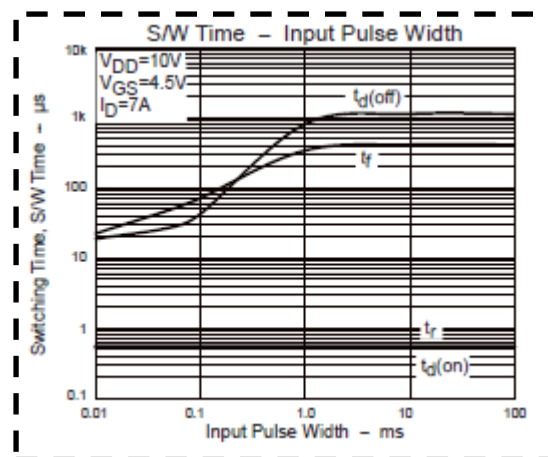
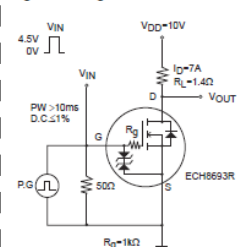


Fig.2 Switching Time Test Circuit 2

**List of affected Standard Parts:**

ECH8693R-TL-W

ECH8695R-TL-W

ECH8697R-TL-W