Product Bulletin

Document #:PB26436Z
Issue Date:12 Sep 2024

Title of Change:	Addition of Rthjc and revision of maximum current & power ratings in the datasheet of NVTFWS012P03P8ZTAG
Effective date:	12 Sep 2024
Contact information:	Contact your local onsemi Sales Office or Sarmila.Kamalanathan@onsemi.com
Type of notification:	This Product Bulletin is for notification purposes only. onsemi will proceed with implementation of this change upon publication of this Product Bulletin.
Change Category:	Datasheet update
Change Sub-Category(s):	Datasheet/Product Doc change

Sites Affected:

onsemi Sites	**External Foundry/Subcon Sites**
None	None

Description and Purpose:

This Product Bulletin is to announce that onsemi is updating maximum current, continuous current and power dissipation ratings and adding $R_{\theta JC}$ values in product datasheet for NVTFWS012P03P8ZTAG. There is no change to the product BOM and assembly process. There is no product marking change.

Differences: Continuous drain current and power dissipation

Before

Parameter			Symbol	Value	Unit
Drain−to−Source Voltage			V_{DSS}	−30	V
Gate−to−Source Voltage			V_{GS}	±25	V
Continuous Drain Current $R_{\theta JA}$ (Notes 1, 3)	Steady State	T_A = 25°C	I_D	−11.7	A
		T_A = 85°C		−8.4	
Power Dissipation $R_{\theta JA}$ (Notes 1, 3)		T_A = 25°C	P_D	2.40	W
Continuous Drain Current $R_{\theta JA}$ (Notes 2, 3)	Steady State	T_A = 25°C	I_D	−7.0	A
		T_A = 85°C		−5.1	
Power Dissipation $R_{\theta JA}$ (Notes 2, 3)		T_A = 25°C	P_D	0.86	W
Pulsed Drain Current	T_A = 25°C, t_p = 10 μs		I_{DM}	47	A
Operating Junction and Storage Temperature Range			T_J, T_{stg}	−55 to +175	°C
Lead Temperature for Soldering Purposes (1/8″ from case for 10 s)			T_L	260	°C

After

Parameter			Symbol	Value	Unit
Drain−to−Source Voltage			V_{DSS}	−30	V
Gate−to−Source Voltage			V_{GS}	±25	V
Continuous Drain Current $R_{\theta JA}$ (Notes 1, 3)	Steady State	T_A = 25°C	I_D	−11.7	A
		T_A = 85°C		−8.4	
Power Dissipation $R_{\theta JA}$ (Notes 1, 3)		T_A = 25°C	P_D	2.40	W
Continuous Drain Current $R_{\theta JC}$	Steady State	T_C = 25°C	I_D	−49	A
		T_C = 85°C		−38	
Power Dissipation $R_{\theta JC}$		T_C = 25°C	P_D	44	W
Pulsed Drain Current	T_A = 25°C, t_p = 10 μs		I_{DM}	47	A
Operating Junction and Storage Temperature Range			T_J, T_{stg}	−55 to +175	°C
Lead Temperature for Soldering Purposes (1/8″ from case for 10 s)			T_L	260	°C

Thermal resistance

THERMAL RESISTANCE MAXIMUM RATINGS (Note 1)

Parameter	Symbol	Value	Unit
Junction−to−Ambient − Steady State (Note 1)	$R_{\theta JA}$	52	°C/W
Junction−to−Ambient − Steady State (Note 2)	$R_{\theta JA}$	145	

THERMAL RESISTANCE MAXIMUM RATINGS (Note 1)

Parameter	Symbol	Value	Unit
Junction−to−Ambient − Steady State (Note 1)	$R_{\theta JA}$	52	°C/W
Junction−to−Ambient − Steady State (Note 2)	$R_{\theta JA}$	145	
Junction−to−Case	$R_{\theta JC}$	3.3	

Max I_D current

$V_{(BR)DSS}$	$R_{DS(on)}$ MAX	I_D MAX
−30 V	11.3 mΩ @ −10 V	−11.7 A
	20 mΩ @ −4.5 V	

$V_{(BR)DSS}$	$R_{DS(on)}$ MAX	I_D MAX
−30 V	11.3 mΩ @ −10 V	−49 A
	20 mΩ @ −4.5 V	

List of Affected Standard Parts:

***Note**: Only the standard (off the shelf) part numbers are listed in the parts list. Any custom parts affected by this PCN are shown in the customer specific PCN addendum in the PCN email notification, or on the **PCN Customized Portal**.*

NVTFWS012P03P8ZTAG		