



產品變更通知
PRODUCT CHANGE NOTIFICATION

PCN No.	IC-PPCN-150804	Issue Date	Aug-26-2015
TITLE	2N60-C規格書變更(Datasheet Change of 2N60-C)		Page 1 of 2

變更主旨(TITLE):

調整2N60-C部份測試參數內容

Adjusting the electrical characteristic, test condition and typical characteristic of 2N60-C.

變更類別(CATEGORY):

Design Process Raw Material Manufacturing Site
 Testing Packing/Shipping/Labeling Other Datasheet

變更說明(DESCRIPTION OF CHANGE):

為提昇客戶的適用性，本公司依最新驗證資料，調整2N60-C量測的測試參數內容，說明如下：
UTC is notifying customers about a Data Sheet update for the 2N60-C device. This change will enhance customer's accommodation according to latest verification data.

1. dv/dt 從4.5 V/ns調為3.7 V/ns.The dv/dt in Notes 4 is adjusted from 4.5 V/ns to 3.7 V/ns

調整前(Original)

Peak Diode Recovery dv/dt (Note 4)	dv/dt	4.5	V/ns
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調整後(Update)

Peak Diode Recovery dv/dt (Note 4)	dv/dt	3.7	V/ns
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2. $V_{GS(TH)}$, $R_{DS(ON)}$, $t_{D(ON)}$, t_R , $t_{D(OFF)}$, t_F , Q_G , Q_{GS} , Q_{GD} , I_{SD} , t_{rr} , Q_{RR} 調整

調整前(Original)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
ON CHARACTERISTICS						
Gate Threshold Voltage	$V_{GS(TH)}$	$V_{DS} = V_{GS}$, $I_D = 250\mu A$	2.5		4.5	V
Static Drain-Source On-State Resistance	$R_{DS(ON)}$	$V_{GS} = 10V$, $I_D = 1A$		3.6	4.2	Ω
SWITCHING PARAMETERS						
Turn-On Delay Time	$t_{D(ON)}$	$V_{DD} = 300V$, $I_D = 2.4A$, $R_G = 25\Omega$ (Note 1, 2)		40	60	ns
Turn-On Rise Time	t_R			35	55	ns
Turn-Off Delay Time	$t_{D(OFF)}$			90	120	ns
Turn-Off Fall Time	t_F			20	40	ns
Total Gate Charge	Q_G	$V_{DS} = 480V$, $V_{GS} = 10V$, $I_D = 2.4A$ (Note 1, 2)		15	30	nC
Gate-Source Charge	Q_{GS}			4.2		nC
Gate-Drain Charge	Q_{GD}			1.5		nC
DRAIN-SOURCE DIODE CHARACTERISTICS						
Reverse Recovery Time	t_{rr}	$V_{GS} = 0V$, $I_{SD} = 2.4A$, $di/dt = 100 A/\mu s$ (Note 1)		180		ns
Reverse Recovery Charge	Q_{RR}			0.72		μC

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調整後(Update)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
ON CHARACTERISTICS						
Gate Threshold Voltage	$V_{GS(TH)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	2.0		4.0	V
Static Drain-Source On-State Resistance	$R_{DS(ON)}$	$V_{GS} = 10V, I_D = 1A$			4.6	Ω
SWITCHING PARAMETERS						
Turn-On Delay Time	$t_{D(ON)}$	$V_{DD} = 30V, I_D = 0.5A, R_G = 25\Omega$ $V_{GS} = 10V$ (Note 1, 2)		30		ns
Turn-On Rise Time	t_R			25		ns
Turn-Off Delay Time	$t_{D(OFF)}$			90		ns
Turn-Off Fall Time	t_F			25		ns
Total Gate Charge	Q_G	$V_{DS} = 50V, V_{GS} = 10V, I_D = 1.3A$ $I_G = 100\mu A$ (Note 1, 2)		35		nC
Gate-Source Charge	Q_{GS}			3.5		nC
Gate-Drain Charge	Q_{GD}			2.5		nC
DRAIN-SOURCE DIODE CHARACTERISTICS						
Reverse Recovery Time	t_{rr}	$V_{GS} = 0V, I_{SD} = 2.0A,$ $di/dt = 100 A/\mu s$ (Note 1)		275		ns
Reverse Recovery Charge	Q_{RR}			1.1		μC

品質驗證(QUALIFICATION AND RELIABILITY DATA):

本項變更不影響原有品質可靠性。

No change to quality and reliability in the final product.

生效日期(EFFECTIVE DATE OF CHNAGE):

Nov-25-2015

若 貴公司未於收到本通知書起30日內，另以書面提出要求，本公司將視同 貴公司已同意本項變更。

UTC will consider this change approved unless specific requests are addressed in writing within 30 days of receipt of this PCN.

適用範圍(APPLICABLE PRODUCTS):

2N60-C

友順對此變更所引起之不便表達致歉，如果對本變更有任何問題，請與我們的業務代表或經銷商聯絡。

We apologize for any inconvenience causing from this change, if you have any questions concerning this change, please contact your local sales or UTC's sales representative.