

3.8V-36V Vin, 5A, High Efficiency Synchronous Step-down DCDC Converter with Adjustable Frequency

FEATURES

- I mYðaa gj9mte glæ 9hhðYæfk
- $9 = \%)((I mYðaa oð I gððoð_J kmðk2$
 $\% < na L eh jYmj jY)2\%(Ig)^*-$
 $9eZafl Gh jYð_L eh jYmj JYf_$
 $\% < na : E = K < ðkkaaYæf D n d^*$
 $\% < na < E = K < ðkkaaYæf D n d +$
- Oa Åhm JYf_ $2 + \text{ON}\% . N$
- Mhlg -9 gflðngnk Gmthm mj f l
- (ON) ZY c J j f NgðY_
- Ål jY , 0e a %Ka Yf *+e Dgo %Ka
Hgo j EGK =Lk
- Hmð Kcðhð_Eg HKE oð *-n9 l mak fl
mj f l ð Kd h Eg
-)((fk Eðæ me Gf%æ
- , ek Ål jf YðKg l%l Yj Læ
- 9 bñklyZð KU KU 9 bñklyZ f ðr

REVISION HISTORY

FGL=2HY_ fmeZ jk gjhj ngnk j n&ufk eYq a j jge hY_ fmeZ jk d l mj fl n jk&f &
 J n&uf)&2J dYk lgEYjc l&
 J n&uf)&2Mh Y eYp ko lg * &E r d a_mj / Yf LYfd * 80 J B Zgl Yf J d d hY_ +&
 J n&uf)&2Mh Y 9hh&Y&f OYn gjek&
 J n&uf)&2Mh Y Gh jYd_bnf l&f l eh jYmj &
 J n&uf)&2Mh Y <=NA= GJ<=J A GJE9L&F&

DEVICE ORDER INFORMATION

K L*, -(l KL=J	LYh J d	, (((	*, -(l	0	=KGH%0

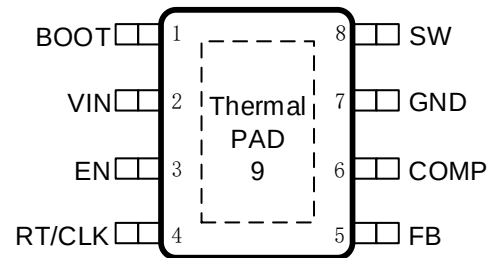
ABSOLUTE MAXIMUM RATINGS

Gn j gh jYd_j %aj eh jYmj nfdkk gl jo& fgl)

N&	%&	+0	N
N& LJYfkafl +((ek *	%&	, *	N
=F	%&	+0	N
: GGL	%&	, ,	N
KO	%	+0	N
: GGL%KO	%&	.	N
GEH : JL DC	%&	.	N
Gh jYd_bnf l&f l eh jYmj LB+	%(	)-(	
KlgjY_ l eh jYmj LKL	%-	)-(	

- (1) Klj kk kZ qgf l gk dkl nf j9Zkgh EYp&me jYd_eYq Ynk na h jeYf fl YeY_ & na & fgl_mjYfl lg
 nf l&f gntka g&J gee f Gh jY&f gf &ufk&
 (2) L eYpN&ljYfkaflngdY_ &_mjYfl Zq kaf Yf n jaa gf Z f &
 (3) L A d&n kgn jl eh jYmj hjgl l&f lg hjgl l na mjd_gn j&Y gf &ufk&Bnf l&f l eh jYmj o&dp)-(
 o f gn jl eh jYmj hjgl l&f &Yl& & gfl&ngnk gh jY&f YZgn l kh aa eYp&me gh jYd_bnf l&f l eh jYmj o&dp
 j m d&l& &

PIN CONFIGURATION



PIN FUNCTIONS

: GGL	)	Hgo jknth&Z&K gj a %a hgo jEGK =L_Yl j& j& gff lY(&m YhY &gj jge : GGL h& lg KO h& &: gglkljYh YhY &gj & Yj_ o f &o%a hgo j EGK =L & gf gj KO ngdY_ & &o&
N&	*	A&hm knth&ngdY_ & gff lY& YdZqhYkk YhY &gj jge N& h& lg F< h& &HY jge N& h& lg a_ j i m f qZqhYkk YhY &gj Yf F< e nkl Z Yk k gjl Yk hgkka&Zd &
=F	+	=fYZd h& lg l j_m&gj o& d&l jfYdhm&h njj fl kgnj &Hm&Z &o) &N lg &YZd l gfn jl j& &Ygj gff llgN& lg fYZd l gfn jl j& lYhg j k&lgj aa j jge N& lg F< gff l&_ =F h& Yf Y b&kl l d&hm ngdY_ & cgm l j k gd&

* gje gj d gje Y&f [ooo&h&gfl fl&ge](#) (*) K&h&f gfl fl L f&g&q g&D & 9&dJa lk J k jn

JL DC	,	K I I *(ál jfYdgk aMgj ට c j i m f q g j k q f j g f a l g Y f p l j f Y d ට c & g f f l Y j k a l g j j g e l a h a l g _ j g n f l g k l k o a a _ j i m f q & f p l j f Y d ට c Y f Z a h m a l ට l g l J L D C h a l & L a l j f Y d g k a M g j k q f j g f a k l g l p l j f Y d ට c j i m f q o a H D D & A l l ට c a _ _ k k l g h k l g h j Y a f e g Y m g e Y a Y a j l m j f k l g j k a l g j Y m k l j i m f q &
:	-	

ELECTRICAL CHARACTERISTICS

N₅* , N_{L5}%()*- lqha YdhYdh dkl kl mf j*- &

--	--	--	--	--

N ₅	Gh jYd_ d h m ngdY_		+0	+	N
N ₅ VMNDG	h m MNDG L j k gd qkl j k	N ₅ j k d_	+&	+&	N eN
A<F	K m go f mjj fl jge N ₅ h d	=F5(fg dY	)	+	9
A	l mak fl mjj fl jge N ₅ h d	=F dYd_ fg dY fg % ko d d_ : GGL%KO 5-N	*-		9

J<KGFV	a %a EGK =L gf % k l Yf	N: GGL%KO 5-N	, 0		e
J<KGFVD	Dgo %a EGK =L gf % k l Yf		*+		e

N _J =	J j f ngdY_ g :		(&1* (0 (0(0	N
=9	=jjgj Ye h d a j l j Yf k %gf m l Yf	% 94AGEH4* 9 N _{GEH5})N	+((	K
AGEHWKJ	=9 e Ypæ me kgmj mjj fl	N : 5N _J = %((eN N _{GEH5})N	+(	9
AGEHWKFC	=9 e Ypæ me k d c mjj fl	N : 5N _J =)((eN N _{GEH5})N	+(	9
N _{GEHW}	GEH a d e h		+	N
N _{GEHVD}	GEH d o d e h		(&	N

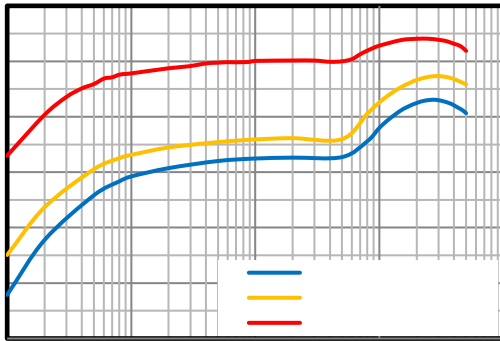
A _{EWK}	a %a hgo j EGK =L h Yc mjj fl d a l j k gd		. 0 0 1&	9
A _{EWKJ}	Dgo %a hgo j EGK =L kgm d_ mjj fl d a l j k gd		1	9
L _{AVD}	Gn j mjj fl h j l l æ f a n h o Y a l æ		-)*	q dk
L _{AW}	Gn j mjj fl h j l l æ f a n h j k l Y l l æ		0)1*	q dk

N=FW	=fYZd a l j k gd		)&0)&-	N
N=FVD	=fYZd d o l j k gd		)&+)&	N
A _{FVD}	=fYZd h d h m d h mjj fl	=F5)N	))& *	9
A _{FW}	=fYZd h d h m d h mjj fl	=F5)&N	-&	n9
L _{kk}	A l j f Ydkg l k l Y l l æ		,	ek

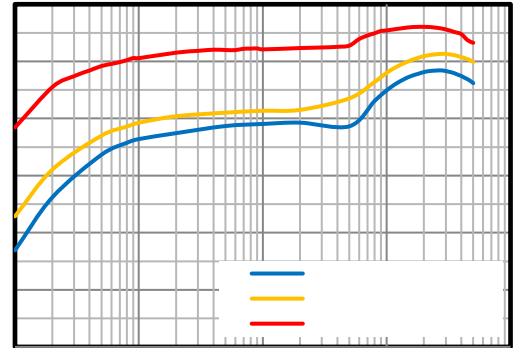
J9F =W/L	j i m f q j Yf_ n k d_ J L e g		((	**((	c r
KO	Ko d d_ j i m f q	J _{JL} 5*((c)	, -(-(-(	--(	c r
J9F =W DC	j i m f q j Yf_ n k d_ D C e g		((	**((	c r
BAL=J	j i m f q k h j Y k h l j n e d h j f l Y_ g ko		.		
lGFVE ₅	E d æ me gf %æ	N ₅ * , N	((		fk

N: GGLMN	: GGL%O MNDG l j k gd	: GGL%O Ydf _ qkl j kx	* & +((	N eN
L<	L je Ydk m gof l j k gd	L B jdf _ qkl j kx	)/(*_	

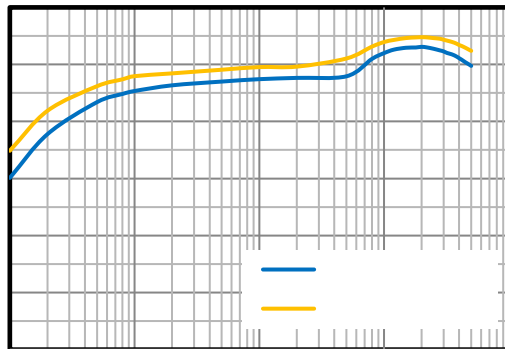
TYPICAL CHARACTERISTICS



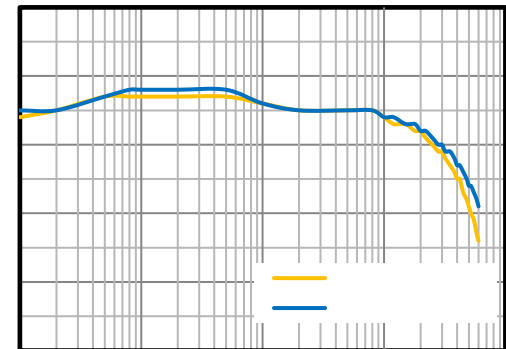
$I_{DSS} = 10 \text{ mA}$ at $V_{GS} = 0 \text{ V}$ and $V_{DS} = 10 \text{ V}$



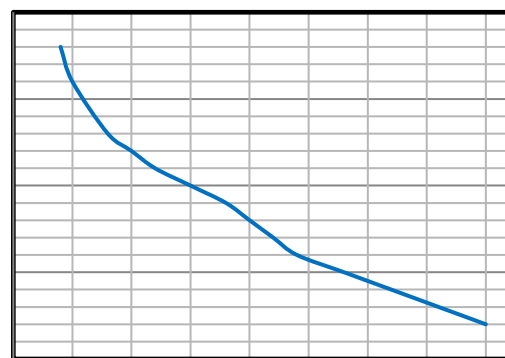
$I_{DSS} = 10 \text{ mA}$ at $V_{GS} = 0 \text{ V}$ and $V_{DS} = 10 \text{ V}$



$I_{DSS} = 10 \text{ mA}$ at $V_{GS} = 0 \text{ V}$ and $V_{DS} = 10 \text{ V}$



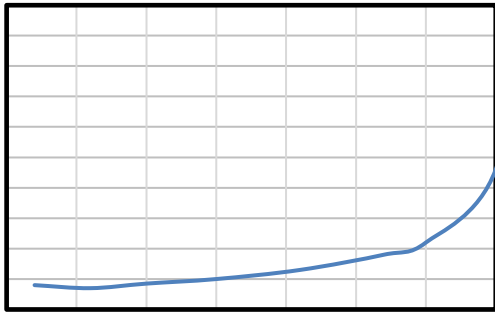
$I_{DSS} = 10 \text{ mA}$ at $V_{GS} = 0 \text{ V}$ and $V_{DS} = 10 \text{ V}$



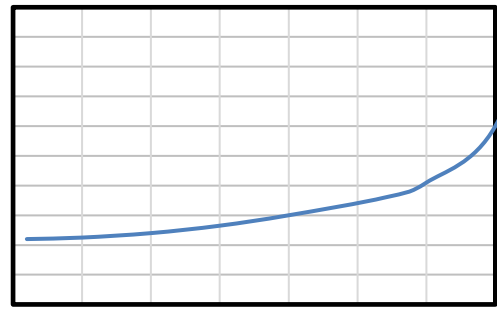
$I_{DSS} = 10 \text{ mA}$ at $V_{GS} = 0 \text{ V}$ and $V_{DS} = 10 \text{ V}$



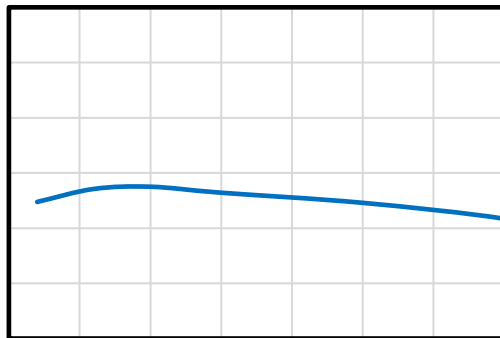
$I_{DSS} = 10 \text{ mA}$ at $V_{GS} = 0 \text{ V}$ and $V_{DS} = 10 \text{ V}$



a_mj 0 K m gof mjj fl nk L eh jYmj

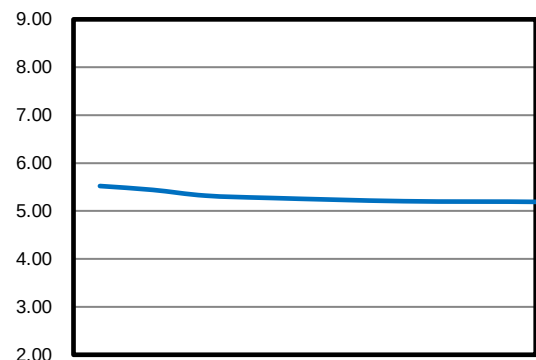


a_mj 1.l mak fl mjj fl nk L eh jYmj

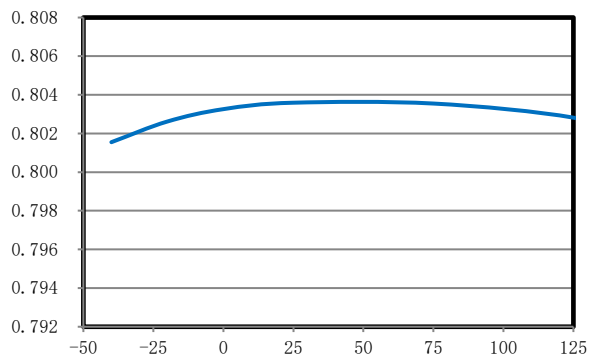


-50 -25 0 25 50 75 100 125

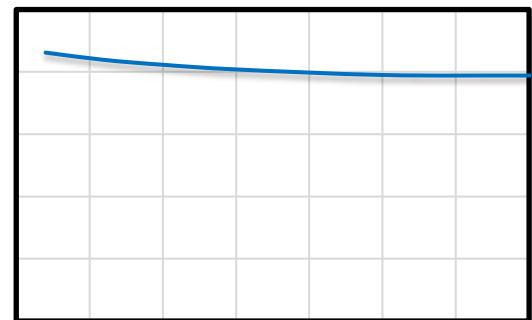
a_mj)(&=F L j k gd nk L eh jYmj



a_mj)) &=F Hm d mjj fl nk L eh jYmj



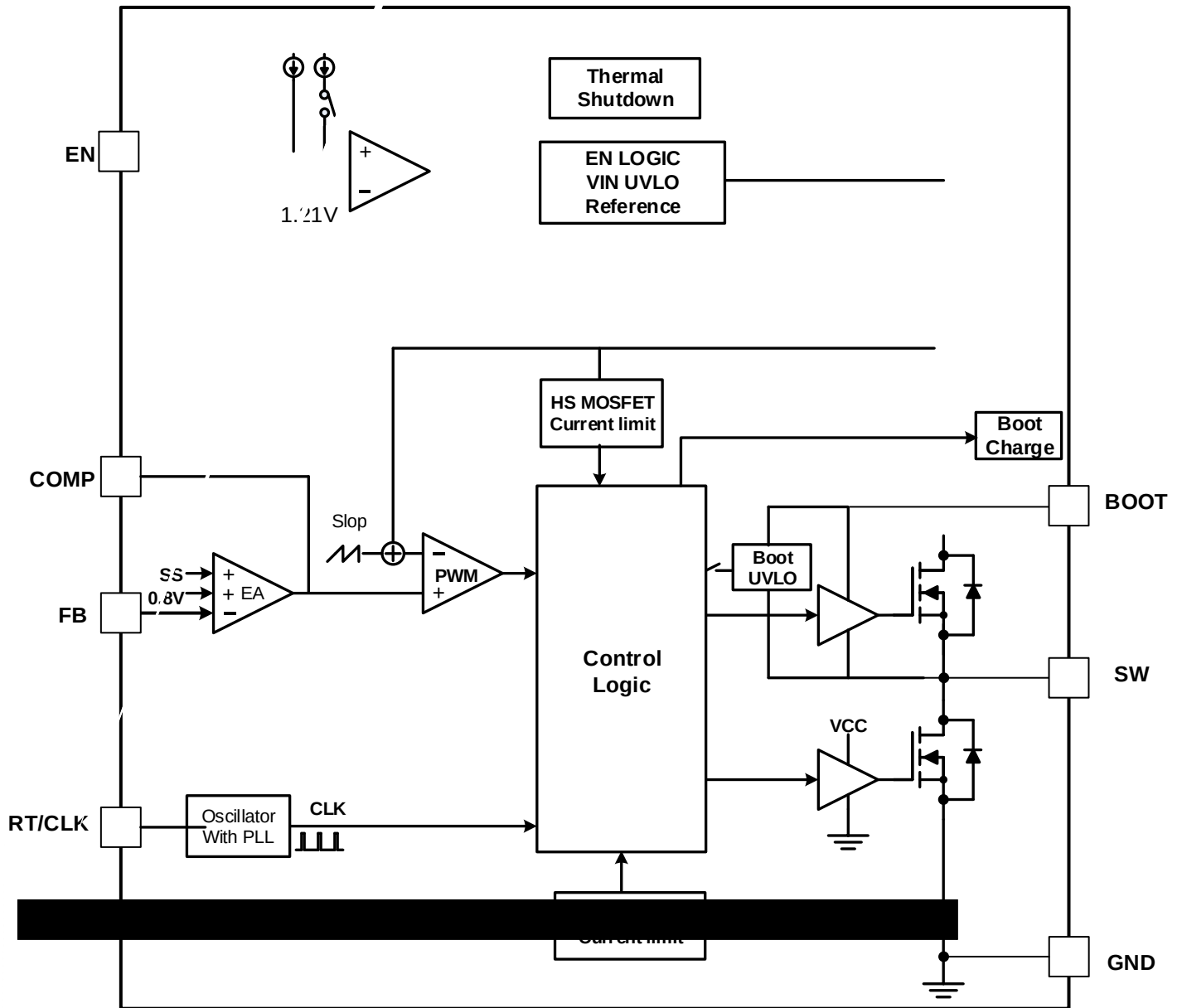
a_mj)*& j f Ng dY_ nk L eh jYmj



Temperature (°C)

a_mj)+&H Yc mjj fl Dæ ank L eh jYmj

FUNCTIONAL BLOCK DIAGRAM



amj), & nf ləfYd: ɔ c <ə_jYe

OPERATION

L K L*, -(l & Y+&N%. N áhnt -9 gnhnt =E Aja f ðkqf jgfgnk Zmc gfn jl joa Zmad, Oe J kgf a %a Yf *+e J kgf ðo%a hgo jEGK =Lk&Aæhde flk gfklyfl j imf qh Yc mjj fle g gfljgd lg j_mðl gnhnt ngðY_ hjgnað_ p ðfl ð Yf ðY lYfkafl j khgfk Yf kæhæð_ l pl jfYd j imf q geh fkyæf kaf&

L koa ð_ j imf q& Y bñLYZd jge)((c rlg * &E roa logk llæ_ eg k j k&lgjk llæ_ j imf q eg Yf l ð c kqf jgfaYæf eg lgghæa k a jl hgo j aaf q gjl pl jfYd gehgf flk ka k&L K L*, -(l Ymj k Yf ðl jfYd, ek kg l%lYl læ lg Ynga ðY_ ð jnk mjj fl Yf gnhnt ngðY_ gn jk ggl mja_ klylñh&L na Yæg kñhgjlk egfga a klylñh oð hj %Z&k gnhnt gf æf&L k Yedkk eg %jYfkaæf Z lo f HOE eg Yf HKE eg gh jYæfk fkmj a aaf qgn joa ðY mjj fl jYf_ &L imak fl mjj fl & lqhaYð * -nð mf jfg ðY gjkd heg gf æf lg Y an a aaf q Y ð l ðY &

L K L*, -(l Yk Y Ynd áhnt klyl%ñh ngðY_ g +&N oð , ((eN qkl j k&L =F há & Y a %gðY_ há oð Yhj æf l j k gd l Y Yf Z nk lg Y bñkl áhnt ngðY_ ð cgn l j k gdk oð log pl jfYd j k&lgjk lge lY mYl a jMNDG kqkl e j mje flk& ðYð_ =F há fYZdkl na oð l ðl jfYd hndñh mjj fl lgl há& gff lð_ =F há lg NÆ ð l ð klylñk nh l na Ymge YlaYð&

L K L*, -(l æhde flkl j imf q Khj Y Kh ljme KK eg mYæf khj Y ð_ g . fl j k d l koa ð_ j imf q& KK æhjgn k =E Ah jgje Yf Zq fgl Yðoð_ eð f j_q l g klyq ð Yf qgf j æ j ZYf gjYka faa Yf l d f_ g læ &

L K L*, -(l mðhjgl læf Ymj k ð ðn l áhnt mf j%gðY_ ð cgn l gnhnt gn j%gðY_ hjgl læf gn j mjj fl hjgl læf oð q d %Zq %q d mjj fl ðæð_ Yf a mh eg gnhnt Yj k gjl hjgl læf Yf l je Yðk m gof hjgl læf &

L K L*, -(l ehðqk ð j imf qh Yc mjj fle g gfljgd&9f ðl jfYd ð c ðæð k lñfð_ gf l ðl jYl a %a hgo jEGK =L l) ð Y q d l f ð mlgj mjj fl j k ð Yððo fl mjj fl jgm_ a %a EGK =L j Y kl l j k gd dn dk l Zql GEH ngðY_ g l ðl jfYd jgg Yehðaj l a % ka EGK =L lñfkg &L kqf jgfgnk ðo%a EGK =L l * lñfkg f lðl f pl ð c q d Z_ ð k gjl ð mlgj mjj fl Yðlgr jg&

L jgg Yehðaj k jn kl GEHfg Zq gehYð_ l ngðY_ g l : há oð Yf ðl jfYd(&N j j f ngðY_ &O fl ðY mjj fl ð j Yk k Yj mla f ðl ZY cngðY_ j ðl lgl j j f jYk k GEH ngðY_ lðl Yñ jY_ ð mlgj mjj fle Y kl ð j Yk ðY mjj fl &L ZY cðgho ðj_mðl kl gnhnt ngðY_ lgl j j f &L na Yæg ðl jYl k Yf ðl jfYðh geh fkyæf ð nájlg hj n fl kmZ% Yjegfa gk æYæf o f mðq q d & j Y l Yf -(gjY ð j imf qh Yc mjj fle g gfljgd&

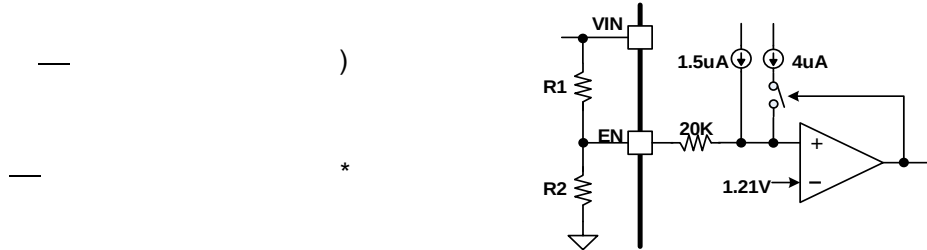
L K L*, -(l gh jYl k ð Hnt Kcñhá_ Eg HKE oð ð l ðY mjj fl lg æhjgn aaf q&O fl ðY mjj fl j Yk k Yf ð je fl ðl ZY cngðY_ d Yk GEH ngðY_ jgh&O f GEH Yð lg Yðo ðeh l j k gd , ((eN lqhaYð na fl jk HKE&L gnhnt ngðY_ Yqk m lg gnhnt YñY æj & Y_ð_ mja_ kñhá_ h jæ &Gf : ngðY_ jghk ðo jl Yf l j j f ngðY_ Yf l GEH ngðY_ j k k YZgn ðo ðeh l j k gd &L f a %a hgo jEGK =L lñfkg f ð f pl ð c hnt &9 l j k n jYd koa ð_ q d koð lqhaYð)9 h Yc ð mlgj mjj fl GEH ngðY_ jghk Yf & ðeh Y_ð_ Yf hnt kñhá_ eg j h Ykal gnhnt gflðmk ð l ðY &

L & gfljgd k e ðk Y anð_ a j aaf q Zq kñhá_ q d kl g j m koa ð_ hgo j ðkk Yf _Yl jæ Yj_ð_ ðkk&L gfljgd j gfkme hlæf inak fl mjj fl & * -nð mja_ kñhá_ h jæ oð fg koa ð_ lg æhjgn aaf q mjj j&

L K L*, -(l & fYZd o fl NÆ há ngðY_ j k k YZgn +&N Yf l =F há ngðY_ p kl fYZd l j k gd g) &ON&L na & &YZd o fl NÆ há ngðY_ Yð Z ðo +&N gj o fl =F há ngðY_ &

Z ණ) &N&f ඳl jfYd) &n9 hmdmh njj fl kgmj lg =F හ් Yණokl na fYZd o f =F හ් ණYk& =F හ් & Y a ngඳY_ හ් l Y Yf Z gff l lgN& ඳ lඳlgklYjlnhl na &

gY a jkqkl e MNDG l j k gd gff l Yf pl jfYd k&lgj a j J) Yf J* k gof ඳ a_mj)- jge N& lg =F &L MNDG j&ඳ_Yf Yඳ_l j k gd Yf Z Ydmm Zq =i m&ඳf) Yf =i m&ඳf * j kh l a ණ&



o j

- Nj& & j&ඳ_l j k gd g N& MNDG
- N Yඳ & Yඳ_l j k gd g N& MNDG

a_mj)- &Kqkl e MNDG Zq fYZd a

L K L*, -(l j _m& kl ඳl jfYd j f ngඳY_ Y (&N o& ±) lgdjYf gnjl gh jYඳ_l eh jYmj Yf ngඳY_ jYf_ &L gnhmh ngඳY_ & k l Zq Y j k&lgj a j jge l gnhmh fg lg l : හ් & A & j gee f lg nk) lgdjYf gjZ ll j j k&lgjk & Mk =i m&ඳf +lg Ydmm j k&lyf g j k&lgj a j k& Lg a hjgn aaf q Y ණ l ණ Y k ඳ j _jnYඳ j k&lgjk Y j gee f & go n j al nYඳ k Y j lg a l j _m& j go&Z egj knk hl&Z lg fg& Y l&_gnhmn ngඳY_ Y mjY q&

+

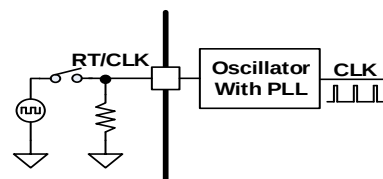
o j

- J : W<GH &l j k&lgj gff l&_l gnhmh lg l : හ් &
- J : W<GL &l j k&lgj gff l&_l : හ් lg l _jgnf &

L K L*, -(l ඳl _jY k Yf ඳl jfYd kg l%l Yj ඳ m& l Y jYe hkl j j f ngඳY_ jge r jg ngඳ lg (&N j j f ngඳY_ ඳ , ek&Al =F හ් & hmd Z ණ) &N ko& ඳ klghk Yf l ඳl jfYd kg l%l Yj j k lk& L kg l%l Yj Y&g j k lk m&ඳ_k m gof m lg l je Ydgn j ණ Y ඳ _&

L ko& ඳ _j imf q g l K L*, -(l & k l Zq h&Y ඳ _Y j k&lgj Z lo f JL DC හ් Yf l _jgnf gj kqf jgf&ඳ_lg Yf pl jfYd ණ c&

A j k&lgjk ll& _j imf q eg Y j k&lgjh&Y Z lo f JL DC හ් lg l _jgnf k l kl ko& ඳ _j imf q gn j Y o a j Yf _ jge)((C r lg * & E r &L JL DC හ් ngඳY_ & l qha Yd (&N & JL DC හ් & fg l Y ණ o lg Z dl ණ Y ඳ _gjk gj lg l _jgnf & Mk =i m&ඳf , gj l hඳ ඳ a_mj). &g l je ඳ l j k&lyf gj Y ko& ඳ _j imf q f &



o j ko & ko& ඳ _ ණ c j imf q

a_mj). &K ll& _j imf q Yf ණ c Kqf jgf a Y ණ f

A Yhh Ymfko j Zgl j klgjk llf_jimfqeg Yf ckqf jgfaYmfeg Yf l na
 Yf Z gfamj Ykk gofa amj).& gj Yf pl jfYd ck h j k fl l na ogjck f j klgjk llf_
 jimfqeg &O f Yf pl jfYd ck h j k fl l na Ymge YaYd jYfkafk jge j klgjk llf_eg
 lg pl jfYd ckqf jgfaYmfeg &9 f f jfYdh Yk ck ck gh HDD ck f jfYd ck jimfqgflgl
 pl jfYd ck coa f lqhaYd0-nk& gfn jl jYfkafk jge l ckqf jgfaYmfeg lgl j klgj
 k llf_jimfqeg o fl pl jfYd ck Yhh Yjk&

Lg j m =EAL K L*,-(l æ hde flk j im f q Khj Y Kh ljre KK &L KK ð mjq k ak l
ko ð ð _ j im f q gl j _ mGj h j a Y ð ko ð ð Y jl Y ð j im f q j Y _ Yj m f l Y bnl ko ð ð _
j im f q &L b l j ð _ kh Y f & . gl ko ð ð _ j im f q o ð ð) -)* ko ð ð _ j im f q &L & j im f q ð ð j ð _
m f l æ f & l a gj Zgl j im f q Y bnl Zq j k æ gj h d f Y JL DC h a Y f Y f pl j f Y d d c
kqf j g f a Y æ f Y h d a Y æ f &

9f pl jfYdZgglkljYh YhY agjZ lo f: GGL hf Yf KO hf hgo jkl dYaf_Yl jn jlg a %a hgo j
EGK =L&L ZgglkljYh YhY agjngdY_ & Yj_ jge Yf dI _jY ngdY_ j _mdMgj o f a %a hgo j
EGK =L & g Yf dgo %a hgo jEGK =L & gf&

L MNDG g a %a EGK =L_Y j a j Yk j a f l j k g d g * & N Yf qkl j k a g +-(e N & O f l na
gh j Y k o a a m t q q d g j p l j e d d l d Y ZggkljYh YhY a g j e Y q Z f g l j Y j a f g f k a j Y Z d d f _
l a e & L n g d Y _ Y ZggkljYh YhY a g j a k m a a f l l g j a a _ %a EGK =L m t g f & O f l n g d Y _ Y j g k k
ZggkljYh YhY a g j j g h k Z d o * & -N : GGL MNDG g m j k & L g f n j l j g j k l m j a f _ g f d o %a EGK =L
h j a a Y d l g j j k l n g d Y _ g ZggkljYh YhY a g j l g _ m Y j Y f l l g f n j l j k g h j Y a f g n j Y o a m t q
j Y f _ &

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GmD<G eg & a %>GMLGK VLV QGGLUSGf Uge Yk Zg Ykl : GGL h d lg KO h f ngdY_ a a j l Yf
: GGL MNDG l j k gd * &N&O f l ngdY_ jge : GGL lg
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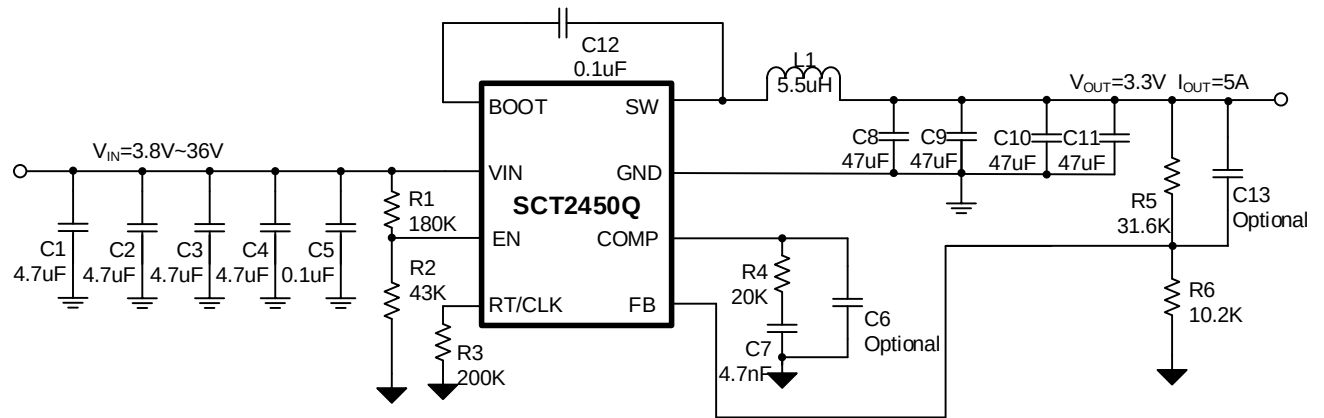
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a_mj)/ &D<G Gh jYaf YjYI jkla Ngm 5-N

L á mlgj mjj fl & egfagj mja_ a %a EGK =L I) Yf o%a EGK =L I * gf&L K L*, -(l æhde flk gn j mjj fl hjgl laf oã q d%q%q d æãã_ a %a EGK =L h Yc mjj fl Yf o%a EGK =L nYd q mjj fl lg Ynga á mlgj mjj fl jnffá_ YoYq mja_ mf ph l gn jðY gj gnihm Yj k gjl gf æf&

O f gn jðY gj Yj k gjl Yhh fk l gfn jl j Yffgl hjgna gnihm mjj fl lg kY& q ðY á_j i m e fl& L á mlgj mjj fl & ðeh Y gn j mjj fl æãYaf&L nk l gnihm ngðY_ jghk Z o j _mã ngðY_ oã : ngðY_ dkk l Yf á l jfYdj j f ngðY_ gflá mgnkð&L GEHhá ngðY_ jYe hk nm lg a ðeh ngðY_ +&NIqhaY&O f GEHngðY_ & ðeh gj-)* q dk l gfn jl jklghk koã á_&9 l j j e Yá á_ G gj 0)1* q dk lq lqãq j klYjlk jge kg l klYj l á_h Yk &Agn jðY gj Yj k gjl gf æf klã pãlk

APPLICATION INFORMATION



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LjYfka fl J khgfk)&-9 Ig +&-9 dY kl h	Ngm 5)+-eN
KlYjl Ähm NgdY jkd NÆ	-&. N
Klgh Ähm NgdY Ydh NÆ	, &. N

L gnhmngdY_ ak l Zq Yf pl jfYdj kalgj aa j
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 l dhmlngdY_ ak jaf_ Yf l gl j gjhgo j gof gj Zjgo f gnk o f l dhmlngdY_ ak Yaf_ & gj l

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a_ jk jak j kñYf Yf 0 jkYmjYñf mjj fl&9_gg jñd gj l jeðð_l ð mlyf lgnk ð lg Y00
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- D_ ð l ð mlyf g ð mlgj
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- N_G_M_L ð l gñhñ ngdY_ *
- N_ ð l ð hñ ngdY_

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- A_M_ eYp ð l eYpæne < 0Y mjj fl
- D_A_ ð g a a f l g A_H l g A_M_

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Yf ð mlgj ggk ð jY mjj fl kh ðñ l kYmjYñf mjj fl d_j_ j l Yf ð h Yc gh jYñf mjj fl Yf
J_E_K mjj fl Y0g fgl Z p &L j gj l h Yc koa ð_ mjj fl g ð mlgj A_H=9C Yf A_J_E_K Yf Z
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Ydkg Yn Y j&hd njj fl jYaf_j Y j l Yf l e Yp&me fhm njj fl j&hd &L JEK njj fl f l fhm
YhY agj Yf Z Ydmd nkaf_ =i mYf)+&

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j imf q d j&_ YhY agj & Hd Yk qk Yk hgkkaZd lg l na h&k&

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YhY agjo& P-J gjZ ll j_Y adlj& j gee f &L YhY agjk gmd Yn Y)(N gj a jngdY_
jYaf_&

L k d l&f g gnthm YhY agjo&Y l gnthmngdY_ j&hd f kl Y qklY Yf qY l jYfka fl h jgje Yf &

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YhY agj & jYea YhY agj& gj jYea YhY agjk l YhY af ge&Y kl gnthm j&hd & gj
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YhY ðgjk Yf ðk egkl g l ð YhY ðYf Y jY ngðY_ &L j gj d Yn e Yj_ð gf l ngðY_ jYð_ lg

L kqkl e jgkkn j j i m f q o j l ZY c d g h Y k m f a q _ Y a f a e h g j l Y f l 8 9 d o j j g k k n j j i m f q j k m k a k d o j d f Y f d Y l j Y f k a f l j k h g f k 8 9 a j j g k k n j j i m f q g m d Y n k l k q k l e n f k l Y z d & 9 j g e e f j m d g l m e Z a l g k l l j g k k n j j i m f q l g Z Y h h j g p a e Y l d)) (g k o a f _ j i m f q & L g d o a _ k l h k Y f Z g d o l g Y d m d l p l j f Y d g e h f k Y a f g e h g f f l k & Y d m d l g e h f k Y a f j k a l g j J , o a = i m a f * - g f j g k k n j j i m f q a k d l &

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L f Y d m d / Z q h d Y a _ Y g e h f k Y a f r j g Y g j Z g j l g m h n k l Y _ h g d &

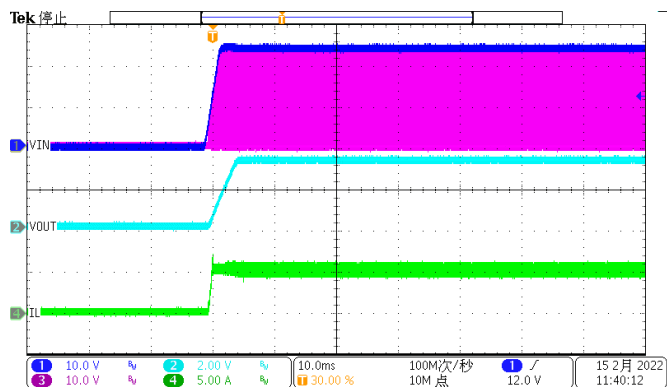
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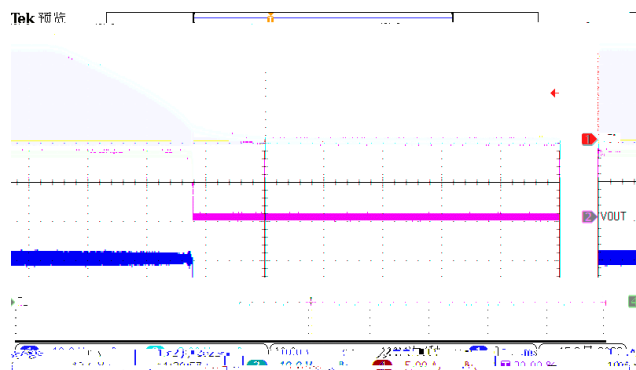
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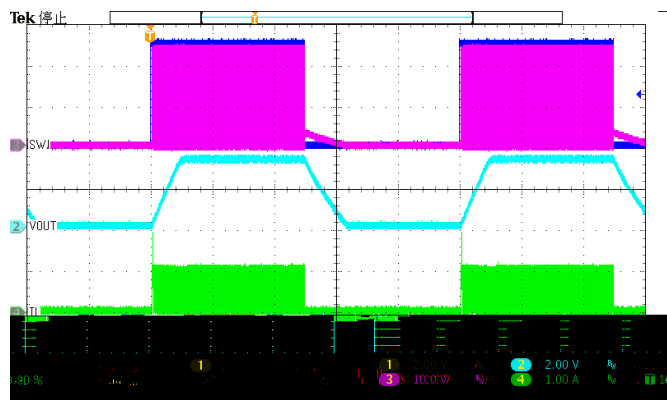
Nđ 5*, N Ngm5+&N mf dkk gl jo ã f gl



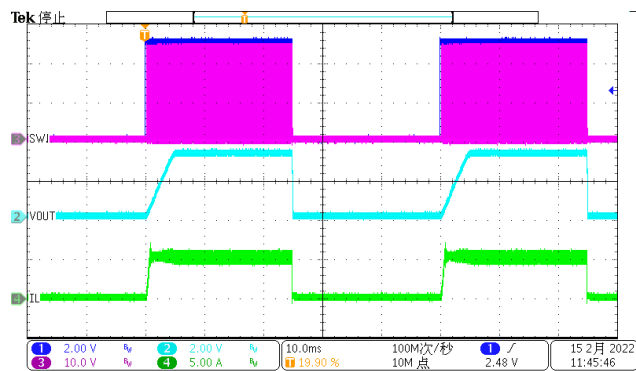
a_mj)1&Hgo j nh 5-9



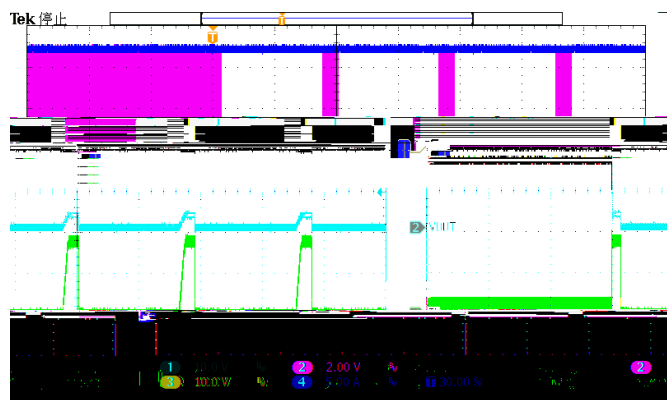
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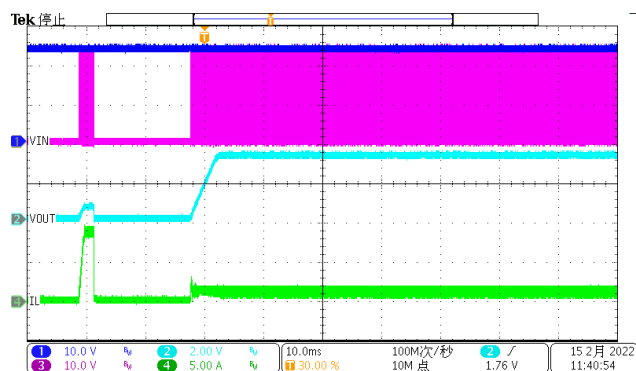
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a_mj *+&Gn j mjj fl Hjgl l 9 lg Yj k gjl



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Hjgh j H : dYqgnl & Y jaaYdgjK L*, -(l kklYZd Yf aafllgh jYaf&L ljY k gf mlaf_Ykl koa af_mjj flk gjngdY_k Yj Ykqlg af jYloa kljYq af mlyf Yf hYjYkaa YhY afYf lg_f jY fgaf Yf_jY h jgjeYf & gjZll jj kmk gduol k _na af kYkZ du2

1. Hgo j _jgm af_k e & n jq jaaYdZ Ynk g Yjjqaf_hgo j l jeYdYf _af Zgm af_fgaf Ykkg af oaf du c j i m f q&L l neZg jmd & lgeYc _jgm ljY du kl af h f f Yf hgo j Yj & l j a n n f d g f H : & K m a a f l d h d f af _jgm Yj Yo a d g h l a a l jeYdYf fgl Ynk af_gn j Y Yj Y&
2. HdY Ydu =KJ jYe a YhY agjYk duk lg Naf ha Yf l _jgm Yk hgkkaZd lg j m hYjYkaa l&
3. gj gh jYaf Y m d j Y duY l lgh ka _jgm Yj Yenkl hjgna Y i n m Y af ka Y af _Yj Y&EYc kmj lgh koa af_dugh oaf hgo j Yn du j af h f f g _jgm af_&
4. L Zglge dY j & Y d j _jgm h d f g f f l lgl _jgm h d f g f lgh dY j Zq na k&L hgo j hY

PACKAGE INFORMATION

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