

4.4V-80V Vin, 1A, High Efficiency Synchronous Step-down DCDC Converter

FEATURES

$K_{fcc} = K^{**} K_{fcc} \frac{cb}{b_{ff}} \frac{ca}{L_{f4}}$
 $\frac{c}{N} \frac{I}{caN} \frac{L}{a} = \frac{+4}{*} = \frac{+}{/} =$
 $Q_{cC} \frac{P}{f} \frac{a}{L} \frac{a}{4} (P^{2*} P$
 $= \frac{c}{I} = \frac{4+}{+P} + \frac{eL}{-} \frac{P}{f} \frac{a}{-} \frac{+}{/} =$
 $C_a \frac{GL}{M} \frac{N}{-} \frac{+}{0} \frac{L}{-}$
 $F_b = \frac{4*(0)}{F} K_c = \frac{4}{J} \frac{f}{Mec} \frac{ca}{G} \frac{JMG}{c} \frac{Feb}{F}$
 $x \frac{f}{f} = \frac{f}{eM} \frac{b}{c} \frac{c}{c}$
 $\frac{C}{fM} \frac{Nc}{-}$
 $J \frac{A}{C} \frac{c}{c}$
 $L \frac{M}{M} \frac{c}{c} \frac{Gc}{c} \frac{I}{Nc} \frac{GC}{-}$
 $F \frac{c}{c} \frac{J}{cc} \frac{f}{Nb} \frac{b}{f} \frac{d}{f} \frac{C}{c}$
 $P \frac{f}{a} \frac{O}{-} \frac{P}{f} \frac{a}{F} \frac{el}{J} \frac{c}{c}$
 $"OPFI \frac{Nb}{b} \frac{f}{B} \frac{c}{c}$
 $M \frac{cb}{c} \frac{c}{c}$
 $I \frac{f}{a} \frac{I}{N} \frac{J}{c}$
 $M \frac{J}{2FJ} \frac{ea}{-}$

APPLICATIONS

SCT CONFIDENTIAL

, _c c (dc _ (, *, / Mdc = _ N_b f a = (&F (ffLab L_ _ _

SCT CONF

ELECTRICAL CHARACTERISTICS

$P_{\text{CH7}} \cdot P_{\text{Nb7}} \cdot * = +, / = \& \text{ c f f c } \dots, / = ($

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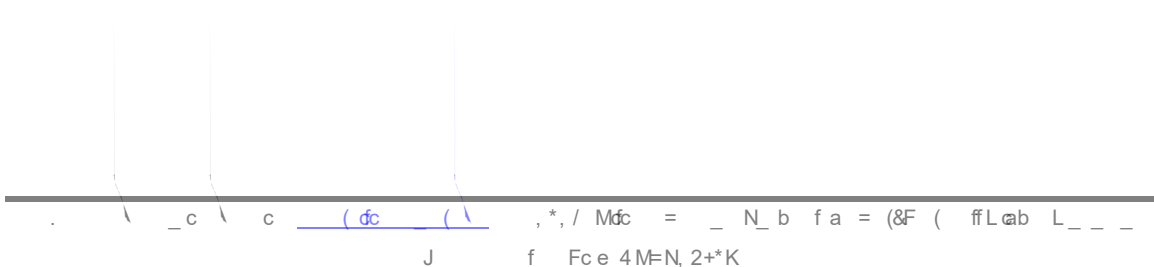
P_{CH}	$I _ \text{ c a c } \text{ f a}_$		$\cdot (\dots 2^*$	P
P_{CHYOPFI}	$C \text{ OPFI Nb}_ \text{ b f } \text{ B } _ _ \text{ c }$	$P_{\text{CH}} \text{ c c a}$	$- (/ / \dots \cdot (\dots - **$	P P
$M_{\text{B H}}$	$M_{\text{b}} _ _ \text{ PCH c}$	$H7^*$	$* (0 \dots + (/ 2$	
$\&$	$K \text{ c } _ _ _ \text{ PCH c}$	$H7 - (-P\& \text{ c b c a}\& < \text{ NMQ } 7/P$	$\dots, \dots 0 -$	
$C \text{ c}_Y \text{ PG}$	$\text{c}_ _ _ \text{ PCH c c } \text{ PG}$	$P_{\text{CH7}} \cdot 2P\& \text{ H7/P}\& P_{\text{CN7/P}\& \text{ f}}$	$\dots 0$	

$L \text{ M HYB}$	$B_{\text{ab}} \text{ c}_ _ \text{ GI M N } _ \text{ c } _ _$	$N_{\text{b7}}, / =$	$- ** \dots -, * \dots - 2^*$	\
		$N_{\text{b7}} \cdot * +, / =$	0^{**}	
$L \text{ M HYF}$	$F \text{ c}_ _ \text{ GI M N } _ \text{ c } _ _$	$N_{\text{b7}}, / =$	$+ \cdot * \dots + 0^* \dots, **$	\
		$N_{\text{b7}} \cdot * +, / =$	$- **$	

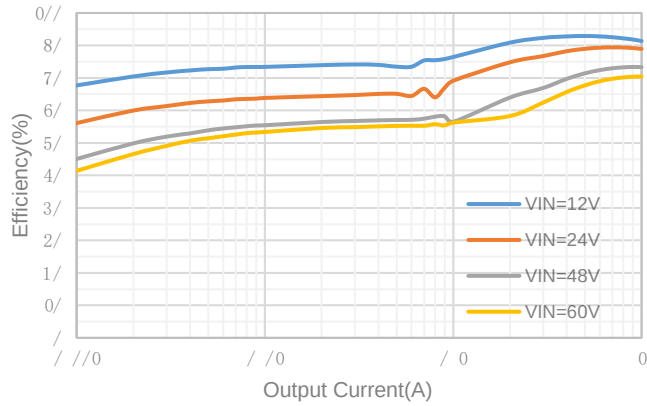
P_L	$L _ _ _ _ \text{ f a}_ <$	$N_{\text{b7}}, / =$	$* (33 \dots + \dots + (* +$	P
		$N_{\text{b7}} \cdot * +, / =$	$* (31/ \dots + (*, /$	

G_{CYBM}	$B_{\text{ab}} \text{ c}_ _ _ \text{ GI M N } _ \text{ e } _ _ \text{ f c c b } _ \text{ b f }$		$+ (- \dots + (1 \dots, \dots$	
$G_{\text{CYFML}} =$	$F \text{ c}_ _ _ \text{ GI M N } _ \text{ c a } _ _ \text{ f c c b } _ \text{ b f }$		$* (3 \dots + (- \dots + (0$	
$G =$	$T _ _ _ _ \text{ b } _ \text{ b f }$		$\dots, *$	\
P_{Bc}	$B_{\text{c}} \text{ a a } _ \text{ b } _ \text{ b f } _ \text{ f a}_ < \text{ c}$		$* (- 1/$	P
$B_{\text{c}} \text{ Y}_f$	$_ \text{ f } _ \text{ c } _ \text{ Bc } \text{ a a } _ _$		$\dots, / 0$	$\text{f}_$
$B_{\text{c}} \text{ Y}_c$	$B_{\text{c}} _ _ \text{ c } _ \text{ c } _ _$		02	\
G_{EYGH}	$G_{\text{c}} \text{ c } _ \text{ c } _ _ \text{ e } _ _ \text{ JMG}$		$* ($	

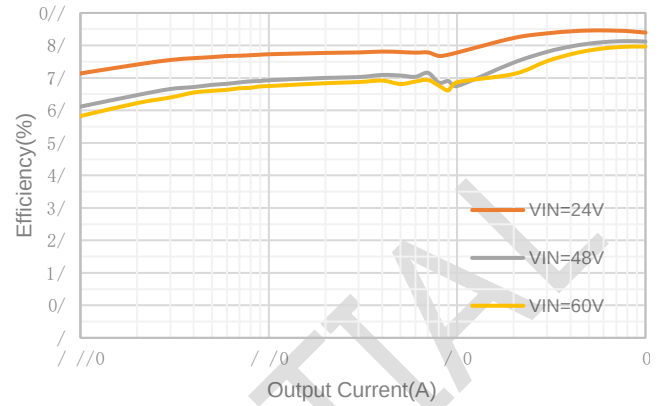
P_{HYB}	$\text{f}_ \text{ b a b } \text{ b } _ \text{ b f }$		$+ (, / \dots + ($	P
P_{HYF}	$\text{f}_ \text{ f } \dots \text{f}_ \dots 5$			



TYPICAL CHARACTERISTICS



Efficiency (%) vs Output Current (A) for VIN=12V, 24V, 48V, 60V



Efficiency (%) vs Output Current (A) for VIN=24V, 48V, 60V

Efficiency (%) vs Output Current (A) for VIN=12V, 24V, 48V, 60V

Efficiency (%) vs Output Current (A) for VIN=24V, 48V, 60V

Efficiency (%) vs Output Current (A) for VIN=12V, 24V, 48V, 60V

Efficiency (%) vs Output Current (A) for VIN=24V, 48V, 60V

SCT CONFIDENTIAL

OPERATION

Nb_M=N, 2+*K c . (P 2*P c &+ & GC c f b e _ _ cb d c -, * L
bab c _ +0* L f c _ _ GI M N (Cc f _ _ _ e _ _
f _ a f _ f a_

SCT CONFIDENTIAL

SCT CONFIDENTIAL

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Q b _ b _ _ cc _ & b _ f a _ ff ff c _ _ _ (< c b f _ _
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SCT CONFIDENTIAL

+* _ c c (dc) , *, / Mdc = _ N _ b f a = (&F (ff L ab L _ _ _
J f _ Fce 4M=N, 2+*K



GI M N c f c _ _ GI M N c (c _ c c _ a _ b _ M=N, 2+*K c _ c c c _
 _ _ f \ _ (_
 Nb_ OPFI b a b c _ GI M Na _ c _ b b _ b f , (2P(Q b _ b _ f a _ c
 _ f , (2P&<MN OPFI &b _ f a _ c c c c c _ c _ b a b c _ GI M N
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 a _ b _ _ _ _ c (

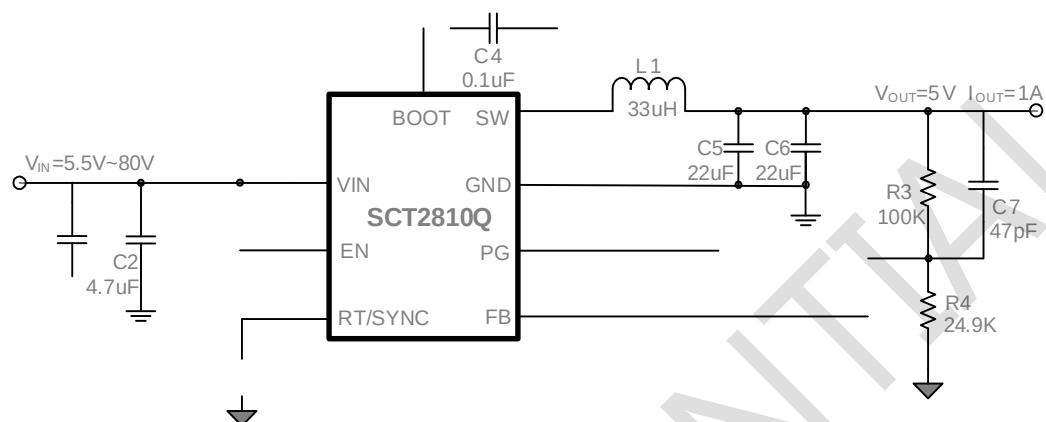
Nb_bc
b_a f (_ c _ _ e_ b_ _ a_ b c c _ ff_c_ b_ f c _ _

Nb_M=N, 2+*K c f\ _ b_l _ f a_J _ c l P J c c c c _ f a _ b c a
f c _ & _ _ c a f cc fab f c (Nb _ f a _ c l P J
c c _ b_ < c f a_ b_ c _ f _ _ f a_ (Qb_ < f a_ ++, c _ f
+P _ _ f a_ & b_ b a b c_ G l M N c _ c _ (Qb_ b_ <
c _ f a_ ff _ f ++* b_ +P _ _ f a_ & b_ b a b c_ G l M N a c (

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b_ c f cb, * _ f (Nb_JA c c ff_f b_ b_ < c f _ b_ 21 a_ _ b ++, b_
c f c _ f _ _ f a_ cb, * _ a f c b c a c _ (f & b_JA c ff_f c P c O P l b_ f
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Nb_M=N, 2+*K _ b_ _ c _ b_ a_ c a _ c b_ c c c cc (l _
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d c _ _ ff_f +/- =&b_ _ c _ _ c b c _ f b _ (

APPLICATION INFORMATION



C P f a _	. 2P H \ f / (P 2*P
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+, P	,1. e	,. (3 e
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b_4

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 +P(

Bab_ c bca _ _ c _ ff_ f_ c _ &_ fca c f _
 f a_ _ c f_ (B _ _ & b_ bab_ c bca _ _ c bca f _ & bcb
 a _ . ** eB _ c _ f_ _ bc_ _ b_ ff f c _ c_ bab_ cc_ _ c (_ _ c bca

Nb_ c _ LN)MSH= AH
 c bca _ _ b_ _ (Nb_ c _ f _ ca
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+** eB	, / / e
+ / ** eB	+0(3 e
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, , ** eB	++ / e

b_4

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 LGM _ _ = _ c _ " =L (F a_c _ f _ c f _ c _ _ c f _ ba _ b _ c _ f _ c _ &
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 bab_ _ c _ c _ & _ f _ _ c _ _ (a _ f _ _ _ c _ a _ b _ c _ _ c _ ff_
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"1

Qb_4

GJJ c b_ c _ e _ e _ (
 Fc b_ c _ c _ (
 MQ c b_ c bca _ _ (

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 J f _ Fce 4M=N, 2+*K

SCT CONFIDENTIAL

+0 _c c (dc) J ,*, / Mdc = _ N_b f a = (8F (ffLab L_ _ _
f _ Fce 4M=N, 2+*K

SCT CONF

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PACKAGE INFORMATION

