

4.2V-60V Vin, 3A, High Efficiency Step-down DCDC Converter with Programmable Frequency

FEATURES

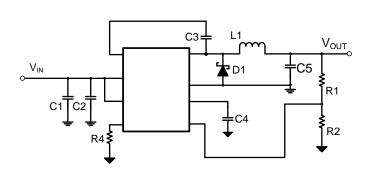
Û a þa að a 4 ¦ OE q { [cag^ OE] | a8aæa[} • OÆÒÔ-Û100 Û * æþãā^å ¸ ão@o@ Ø[||[¸ ā] * Ü^• * |o• : - Ö^çã&^ V^{] ^ kæč ¦^ Õ¦æå^ 1: -40 »Ô (125 »Ô - Ö^çã& PÓT ÒÙÖ Ô|æ•ã&æá[} Š^ç^| P2 - Ö^çã&^ ÔÖT ÒÙÖ Ô|æ•ãã&æãa[} Š^ç^| Ô3Ó Yãa^Q] cÜæ) *^: 4.2X-60X 30EÔ[} @a ~ [~ U ~ d ~ cÔ ~ | | ^ } c 0.8X 1 1% Ø^^åàæ&\ Ü^-~\\^} &^ X[|æe*^ Qc^* | aac^ å 220{ ô P a @ Ù aa^ T U Ù Ø Ò V Š[Û ã • &^ c Ô ` | | ^ c 100 ` Œ Ú |• ^ Ù \ 4] 4 * T [å ^ (ÚÙT) 4 | 2 @ |[æå 100} • T aj aj ~{ U} -caj ^ Ofabio cæa |^ Ù[~e• ædc Vã[^ Ofabo • cæai/^ ع^~~^} & 100SP: (f 1.2TP: $\hat{O}(c^{\prime})$ and $\hat{O}(8^{\prime})$ \hat{U}^{\prime} & \hat{U}^{\prime} & \hat{U}^{\prime} \hat{U}^{\prime} and \hat{U}^{\prime} $U_1^{\prime} \times \tilde{a}_1$ \tilde{a}_1 \tilde{b}_2 \tilde{a}_1 \tilde{b}_3 \tilde{a}_4 \tilde{b}_4 \tilde{b}_4 \tilde{a}_4 \tilde{b}_4 $X[|\alpha e^{A} \wedge W] a^{A} - X[|\alpha e^{A} \wedge S[a] U c U [e^{A} a a] (WXSU)$ V@^•@|åæ}åP^•c^\^•ã Š[Ö| [] [cT [å^ U] ^ | æea[} $U_{\zeta}^{+}-c[|\alpha e^{+} \wedge ae^{+} a^{+} U_{\zeta}^{+}-V_{\zeta}^{-}] ^{+}ae^{+} V_{\zeta}^{+}$ Occasiana) ^ a and OUUÚ-8 Úass at ^

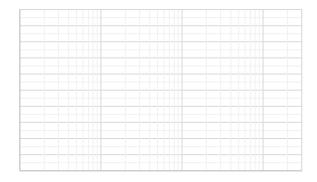
APPLICATIONS

12-X, 24-X, 48-X Q\åັ•d^aa)å V^|^&[{Ú[,^\ Ù^•d^{ Q\åĭ•dãæ; OE ([{ææā[}aa)å T[([¦Ô[])d[| X^@ãA|^OE&A^••[¦å]•

DESCRIPTION

TYPICAL APPLICATION





4.2V-60V, Asyncronous Buck Converter



REVISION HISTORY

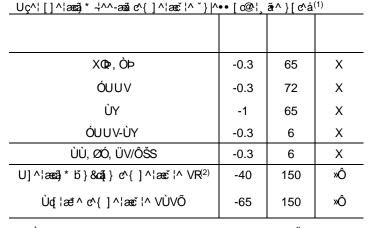
ÞUVÒ: Úæ⁴^} { à^|• -{|| ||^çã| ~ • |^çã ã|}• { æê åã-4| -{[{]æ⁴^}~ { à^|• ã c@ &`||^}cç^|•ã|}. Ü^çãa ã 1 1.0: Ü^|^æ•^ q 1 | | [å 8cã 1 }

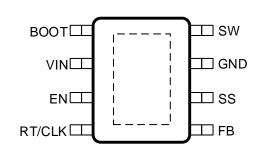
DEVICE ORDER INFORMATION

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ABSOLUTE MAXIMUM RATINGS

PIN CONFIGURATION





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ÒÞ	3	Ö}æà ^]āj q[c@ ¦^* æq[¦¸ãc@āj c^¦}æ4] ĭ -`] & ĭ ¦ ^} c • [ĭ k x . Ú ĭ à ^ [¸ 1.05 X q[åã æà ^ c@ & [}ç^¦c^!. Ø [æc[¦ & [}}^& cq X OD q[^^} æà ^ c@ & [}ç^!c^!. V@ cæ4] [~ ^•ã q[! åãçãå^! - ¼[{ X OD q[ÕÞÖ & [}}^& cāj * ÒÞ]āj & æ4) æå bŏ • c c@ āj] ĭ c ç [cæ⁴^ [& \[ĭ c c@^•@]å.
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V@⊹{æ¦Úæå	9	P^æcåã•ājæāj}]æc@[~åã^.Ò ^&dã&æ ^&[}}^&aj} q[ÕÞÖ]āj.T`•cà^&[}}^&c^å q[*;[*]*]*******************************

RECOMMENDED OPERATING CONDITIONS

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Xuw	U d cç[æ*	0.8	57	Х
V_R	U]^ æ@i,* b`}&@i,} e^{]^ æe` ^	-40	150	»Ô

ESD RATINGS

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Xòùö	Ô@#*^å Ö^çã&^T[å^ (ÔÖT),]^¦ŒĐÙQRÒÖÒÔ-RÙ-002- 2014•]^&ã&æã[},æ]ā]• ⁽²⁾	-0.5	+0.5	\ X

THERMAL INFORMATION

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R´}&qã}-qí-qí]&@edæ&c^¦ãæqã}]æbæ(^c^¦	5.9	<i>"</i> O/1



ELECTRICAL CHARACTERISTICS

Tājā[*{ [}-cā[^

 $X_{\Phi}=24X$, $V_{R}=-40$ » \hat{O} d125 » \hat{O} , \hat{c}] a_{A} a_{A} U] ^¦ææaj * aj] * cç[|œe* ^ 4.2 60 Χ Χœ Q] ~ cWXŠU V@^• @ |å Χ Xop ¦ãrãj* 3.5 X OP WXŠU P^• c^\^• ã 400 { X Ù@cå[¸}&~;;^}c√;[{ XO₽]ą̃ 10 Œ **Q**PÖÞ ÒÞ=0,}[|[æå ÒÞ-|[æða]*,}[|[æåa,}[}-•,ãa&@3]*, ÓUUV-ÙY=5X,Üüv=200\ô Q $\hat{U}^* = \hat{A} \cdot \hat{A}$ 100 Œ ÜÖÙUÞ´P Pã @•ãa^ T U ÙØÒV [} - | ^•ã æ) &^ 220 { ô $X \acute{o} U U V - X \mathring{U} Y = 5 X$ Xüòø Ü^~\^\ &^ ç[|æe ^ [~ØÓ 0.792 8.0 0.808 Χ Par@•ana^][¸^¦TUÙØÒV]^æ\ &~;¦^}c|a[anco@^•@|a **Q**or′PÙ 4.6 5.2 5.8 Œ Χ Ò) anà | ^ @# @ c @ ^ • @ | å 1.2 X_{ÒÞ}′P 1.05 Χ Xòp´š Ò} æà|^ [[, @@^•@|å Ò} anà|^]ã,] `||-`] &`;;^}c ÒÞ=1X Œ 1 Q₀⊳′š Ò}æà|^]ā[] `||-`]&`;;^}c ÒÞ=1.5X Œ **Q**Þ´P ÙÙ] ¾ & '!\^} c Œ Qù 2.6 ØüŒĐÕÒ″ÜV Ø\^``^}&^ \a*^`•ā* ÜV{ [å^ 100 1200 \P: Ù, ãa&@a, * +\^~~^} &^ \P: Øùy Üüv=200 \ ô (1%) 450 500 550 Øl^~~^} &^ \a) *^~ • \$\ta \) OŠS { [a^ 1200 \P: ØüŒ∍ÕÒ^ÔŠS 100 **}** •

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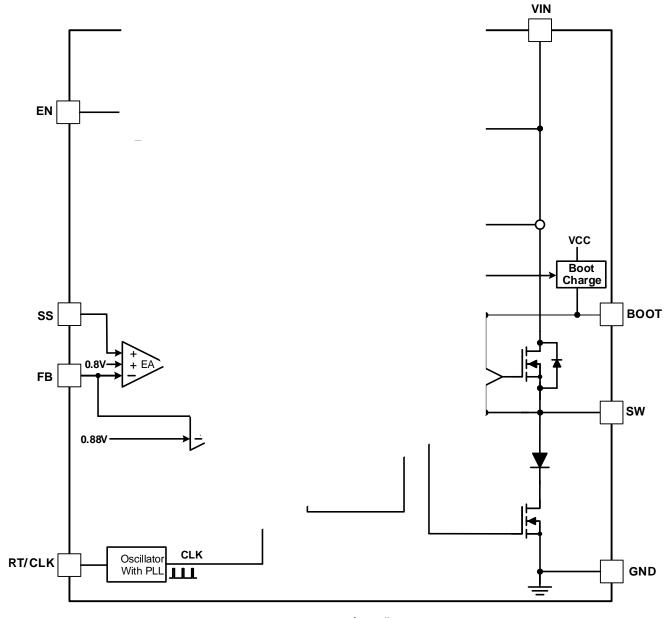
CUÞ′⊤ OÞ



100

X₀=24X

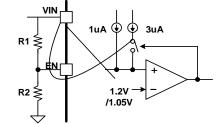
FUNCTIONAL BLOCK DIAGRAM



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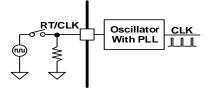
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OF, ^¢c^\} ætà[[ordæt] &æt]æ&át[¦à^c, ^^} ÓUUV]āj ætjå ÙY]āj][, ^\+ c@^ -|[ææā]* *ææ^ å¦āç^\ q[@tt@+orata^][, ^\ TUÙØÒV.V@ à[[ordæt] &æt]æ&át[¦ç[|œt*^ ar &@æk*^å -|[{ ætjā q^*¦ææ^åç[|œt*^ \^* |ææ[¦, @} @tt@+orata^][, ^\ TUÙØÒVār[~-ætjå c@^^¢c^\}æt|[.-+orata^ åā[å^ &[}å* &or.V@ \^&[{ { ^}å^å çætj*^[~c@ ÓUUV &ætjæ&át[|ār 0.1 Ø

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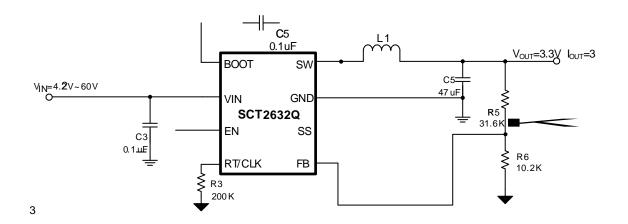
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APPLICATION INFORMATION



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c@ [~cā,^[~c@ ā,c'];æ;][,^|*, āx&@ V@ [~cā,^[~c@ ā,c'];æ;a,*.V@ åā[å^&[]å^&c]; [~c@ {æ¢ā, `{ ā,] `c ç[|æë^, c@ [`d¸cç[|æë^, æ;å c@ *, æ;å c@ *, āx&@;* +^``^}&î.V@ [`d¸c&`||^}cå`lā;* c@ [~cā, `a; {` |ca, |a; |a; a,a c@ *, a; a,a c@ *, a

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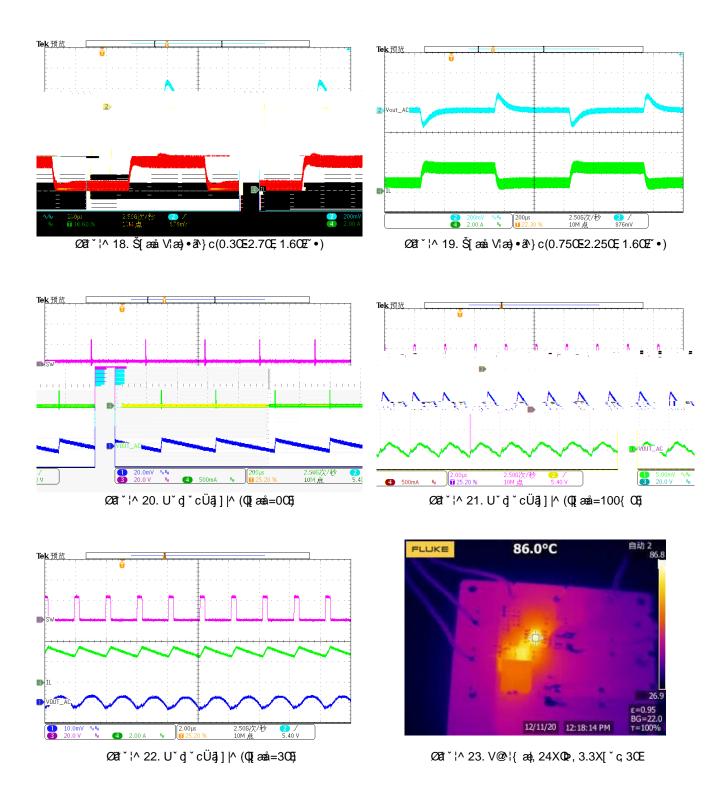


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Ö`^ ([&æ];æ&ãa[¦on å^*¦æåā]* `}å^¦ ÖÔ àãæne, o@ àãæne ç[|œë^ &æa) •ā*}ãa&æa)d^ ¦^å*&^ &æa];æ&ãaæa)&^. Ô^¦æ{ && &æa];æ&ãa[¦on &æa) |[on { [on [~o@)ā &æa];æ&ãaæa)&^ æas |ææ^å ç[|œë^. V@\^-[¦^, |^æaç^ { æb*ā]; [} o@ ç[|œë^ ¦ææā]* (^}on } ~~~&æa^` `æe^^~~~&æā,^ &æa];æ&ãaæa)&^. Vî] &ææa|^, ç [47 Ø&^¦æ4 &&.[`d]`c&æa];æ&ãa[¦on [!\ -[;| { [on cæa]] |&ææaā]}on .



$X_a^3 = 24X$, $X[\check{c} = 3.3X, \check{s}]^{\bullet \bullet} [c^{\circ} \mathring{a}^{\bullet}] [c^{\circ} \mathring{a}$



- 2. Ú|æ&^æ|[ÒÙÜ &^¦æ{ & &æ{ æ&æ[a&æ[a e & [^ of XOÞ] ā æ} å c@ *¦[`} å æ•][• â a | ^ of ¦ ^ å * &^] æ æ ã æ ã æ ~ ~ &c
- 3. Ø\^^. @^\|ā,* åā,å^•@`|å à^] |æ&^ æ &|[•^ q[ÙY]ā, æ)å c@ *¦[`}å æ][••āā|^ q[\^å`&^]æbæ ãæ&^~^&c
- 4. Ø[¦[]^¦æaā[} æc~"|¦æc^å|[æå, o@ d[] •ãa^*¦[ັ}åæb^æ{ ັ•c]¦[çãa^æå^ັ`æc^@ æcåã•đ]ædā]*æb}*æb^æ Tæb^ •`¦^d[]•, ãa&@a}* |[[], ão@][, ^¦@æç^|[, ^¦ã[]^}å^}&^[~*'[ĭ}åå]*.
- 5. $V @ \hat{a} [\alpha [\{ | z \hat{a}^{+} | \tilde{a} \approx | z \hat{a}^{+} \wedge *^{+} | \tilde{a}^{+} | z \hat{a}^{+} | z \hat{a}^{+} | z \hat{a}^{+} \rangle \wedge \delta [] \} \wedge \delta [c @ \wedge *^{+} | \tilde{a}^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^{+} \rangle \wedge \delta [c @ \wedge *^{+} | z \hat{a}^$
- 6. U ˙ d ˙ c ā å å &c [+ æ) å $\frac{1}{4}$ ^^, @^^|ā * åā å^ @ ˙ |å à^] |æ&^å &|[^ c c c w ÙY] ā . V @ ¸ ã & @ * æ ^æ [~c w ÚÔÓ &[} å ˇ &c [+ { ā ā ā ^å c [] ! ^ c ^ } c ^ ¢ & • ā c ^ & æ a æ & ã ā c ~ & [] |ā * .
- 7. V@ ÜV/ÔŠS c^|{ ãjæļãr •^}•ããã;^ q[}[ãr^•[c@ ÜV |^•ãrq[| @] `|å à^ |[&æc^å æ &|[•^æ][••ãa|^ q[c@ OÔ æ) å |[čoå ¸ãc@{ ãjã[æ||^}*c@ [~dæ&^.
- 8. WXŠU æåbő•çÜV¦^•ã•q[¦•æ)å-^^åàæ&\ &[{][}^}o••@;|å&[}}^&cq[•{æ||•â*}æ|*¦[`}å¸@&@{`•c¦^č¦}qfo@}ÕÞ=T•



PACKAGE INFORMATION

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TAPE AND REEL INFORMATION

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