

SCT CONF

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G6C A6Q2E G6 2:0E A6Q2F6 Q 6 F 6DD E96CH:D6 E5

PARAMETER	DEFINITION	MIN	MAX	UNIT
	AFEG E2 6 Q 6			
%	A6Q2E F 4E E A6Q2F6			

PARAMETER	DEFINITION	MIN	MAX	UNIT
	F 2 5J 56= A6C DA64: :42E 2=A D			<
	92C 65 6G46 56= A6C DA64: :42E 2=A D			<
2 5	DE6DD 2G 5 6 : 244 G2 46 H:E96			DA64: :42E

PARAMETER	THERMAL METRIC	ECLGA1.5X2-6L	UNIT
	F 4E E 2 3:6 EE96C 2=GDDE2 46		(
%	F 4E E E A492Q4E6CK2E A2Q 6E6C		
	F 4E E 3 2G 492Q4E6CK2E A2Q 6E6C		
	F 4E E 3 2G E96C 2=GDDE2 46		
0	F 4E E 2 3:6 EE96C 2=GDDE2 46		

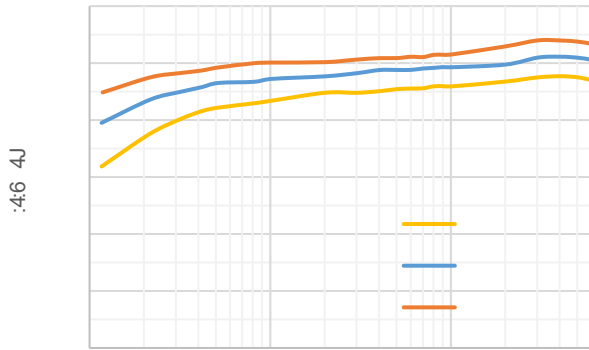
62DFG5 2J6C %06 G2F6D :G : E9:DE236 2G 4 Q2=5 C4 A2CD H:E9 E96CA24<2 6D2 5 42 E
 36 FD65 C56D AFCA D6D %06D6 G2F6DH6G 424F2E5 : 244 G2 46 H:E9 2 5 D: F2E5 2 DA64: :65 3 2G
 %06J 5 EGAGD6 EE96 A6C C 2 46 3E2: 65 : 2 24E2=2AA42E
 : F2E5 %DE 52G % 6 2G KEA 2 5 3 E 4 AA6CB9:4< 6DD K: 6C4 AA6CB9:4< 6DD
 I 2J6C

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%						
EJA42=G2F6D2G E6D65 F 56C						
SYMBOL	PARAMETER	TEST CONDITION	MIN	TYP	MAX	UNIT
Power Supply and Output						
	A6Q2E : AFEG #2 6					
0&	AFE& JDEGDD	QD				
	9FB5 H 4FQ6 E					
	F:6D46 E4FQ6 E C	= 25 DH:E49:				
	6 6G 46 G #2 6	%				
		%				
	A #2<2 6 4FQ6 E					
Power switch						
	: 9 D56 A62<4FQ6 E# :E					
	H D56 G2=6J 4FQ6 E# :E					
Soft start						
%	EDE2E% 6					D
EN						
	: 9 #G6=#9GD9 #5 G #2 6					
	H #G6=#9GD9 #5 G #2 6					
	F=5 H GDD2 46					
	FEAFE :D492C 6 GDD2 46					
Switching Frequency						
(	H:E49: GBF6 4J	: FE				K
E 0	:: F E 6					D
E 0	:: F E 6					D
Protection						
%	%06C 2=D9FB5 H E9GD9 #5					
	JDEGDD					

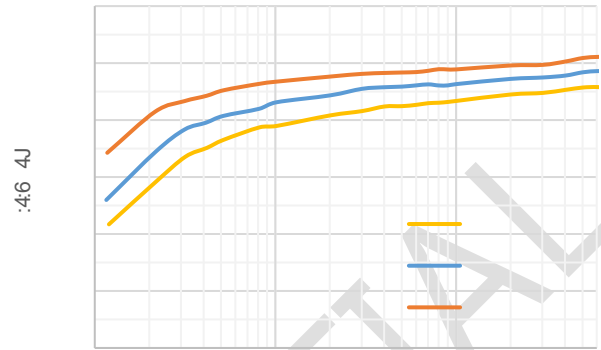
F2Q E665 3J G6CB A6Q2FQ 4 G6-2E E6D65 : AC 5F4E
 F2Q E665 3J 56D: E6D65 : AC 5F4E

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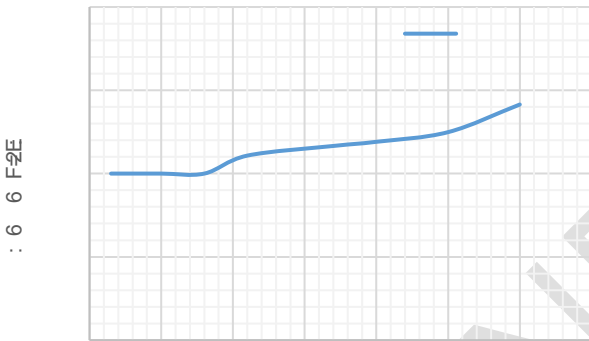
FEAFE4F00 E

: F00 :4:6 4J 0 25 F00 E



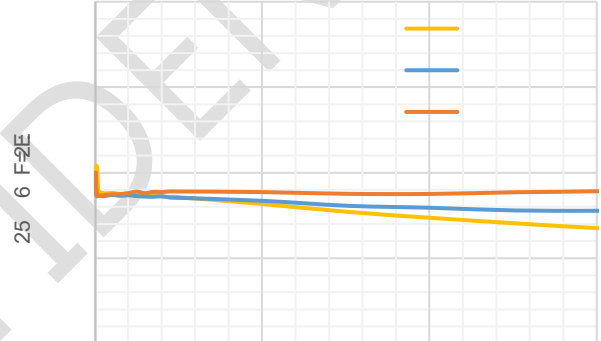
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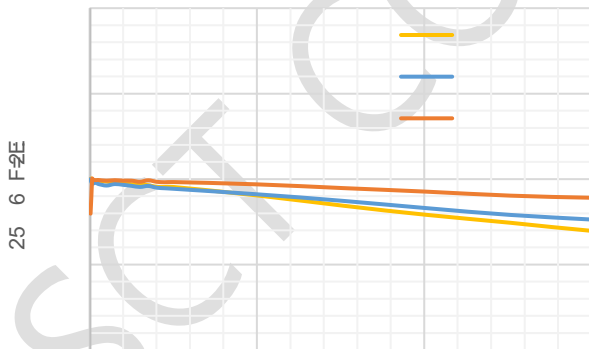
A FEG #2 6

: F00 : 6 6 F-2E



FEAFE4F00 E

: F00 25 6 F-2E



FEAFE4F00 E

: F00 25 6 F-2E



2J6C

KE A2 5 3 E 4 AA6C K: 6C4 AA6C
: F00 %06C 2= 6Q2E

SCTCO

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Overview

%06 % :D2 : AFE FEAFEDJ 49C FD3F4<4 G6CH:ED 3F:E: %D2 5: 5F4E C
E: A6 6 ED 4 DE2 E E 6 4 EC=E G F2B FEAFEG 2 6 ACG5: 6I 46=6 E= 6 2 5 =25 E2 D6 E
GDA D6

%06 DH:E49: GBF6 4J :D 1 65 K %06 % 62F6D: B Q65 D ED2EE 6 E 2G :5 2C 6 : FD9
4F6 E2 5 FEAFEG 2 6 G69 E5FC DE2FA %06 % A6Q6D: F66 GBF6 4J 5F2E
E 249:6G 9: 9 6 :4:6 4J : = 9E=25 A6QE %06 BF:6D46 E4F6 E:DEJA42= F 56C =25 2 5
DH:E49: 2I: F 5FEJ 4J46 42 36 G24965: 5C A FE

Constant On-time Control

DE2 E E 6 % 4 EC=D6 A=J65 E ACG56 2DEE2 D6 E6DA D6 2 5 62DJ = AD23:K2E EE96
36 : : 6249 4J46 E96 9: 9 D:56 %:DEFC 65 C2 1 65 6 D9 EE 6 E 6 A6C 5 %06

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Output Voltage

%06 FEA FEG #2 6 :D D6E3J 2 6I B C 2=GDDE C5:G56C
 2 5 : EJA42= 2AA=42E D496 2E4
 64 6 565 GDDE 46 :D < &D6 BF2E
 E 42=4F=2E

V _{OUT}	R ₁	R ₂
	<	<
	<	<
	<	<
	<	<

H96G

- :DE96 665324< G 6G 46 G #2 6 EJA42=

Input Capacitor Selection

%06 : AFE4FCE EE E96 D6A5 H 4 G6C:D5:D4 E F FD E96G G :EGBF:GD 2 42A24:E CE DFAA# E96
 4FCE EE E96 D6A5 H 4 G6CH9:6 2: E2 : E96 : AFE G #2 6 &D6 42A24:E CH:E9 =H
 C36E6CA6C C 2 46 6Q :4 42A24:E CH:E9) C) 5:6=64EAD 2G FDF2=J DF 6DE5 3642FD6 E96:C=H
 2 5 D 2=6 A6QEF 4 6 :4:6 ED 2 5:E:DEC J G4 6 565 E FD6 2 E96C=H6CG2#6 42A24:E C 6
 F H:E9 D 2=A24<2 6 DK6 E :#C9: 9 GBF6 4J DH:E9: :D6 =246 E96 D 2=DK6 42A24:E C2D
 4=D6 E 2 5 A D2DA DD:3=6

%06 G #2 6 Q2E E96 : AFE42A24:E C FDE36 G2E6CE92 E96 2I: F : AFE G #2 6 5 E96 42A24:E C FDE
 2D 92G 2 CAA6 4FCE E Q2E G2E6CE92 E96 2I: F : AFE4FCE ECAA6 %06 4FCE E: E96 : AFE
 42A24:E C42 36 42=4F=2E5 FD BF2E

%06 H CE42D6 4 5:E 44FQ2E &% H96G

CD A=:42E 49 D6 2 : AFE42A24:E CH:E9 2 4FCE E Q2E G2E6CE92 92= E96 2I: F =25
 4FCE E

(96 D6=64E 46Q :4 42A24:E D :E 665DE 4 D56CE96 6 64EG6 G2#6 2 42A24:E C564G2D 2D E96
 3:2DG #2 6 24CDD 2 42A24:E C: 4G2D

%06 : AFE42A24:E2 46 G2#6 56BC : 6DE96 : AFECAA6 G #2 6 E96 G F=2E C %06 : AFE G #2 6 CAA6 42 36
 42=4F=2E5 FD BF2E 2 5 E96 2I: F : AFE G #2 6 CAA6 44FQ2E 5FEJ 4J4=6

(96G

- :DE96 : AFE G #2 6 CAA6
- DH :DE96 DH:E9: GBF6 4J
- :DE96 : AFE42A24:E2 46
- &% :DE96 FEA FEG #2 6
- :DE96 : AFE G #2 6

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CE9:D6I 2 A6) 46Q :4 42A24:E D Q E5 C : A2Q=6=2G FD65 5 2 C9: 9 GBF6 4J
:E6C 42A24:E C:D A2465 2D 4= D6 2D A DD:3=6 E E96 56G46 A: D

Output Capacitor Selection

%96 D6=64E FEAFE42A24:E CH:=2 64E FEAPEG E2 6 CAA6 : DE25J DE2E 2 5 = 25 E2 D6 EA6C C 2 46

%96 FEAFECAA6 :D6DD6 E2=4 4 A D65 EH A2QD 6 :D 42FD65 3J E96 : 5F4E C4FQ ECAA6 : E9CF 9
E96 BF:Q2=6 E 6Q6D 6DDE2 46 E96 FEAFE42A24:E D2 5 E96 E96CD42FD65 3J E96 : 5F4E C4FQ ECAA6
492C: 2 5 5:D492C: E96 FEAFE42A24:E D % 249:6G6 D 2= FEAPEG E2 6 CAA6 49 D6 2 =H FEAPE
42A24:E C =6 46Q :4 42A24:E C C 46Q :4 42A24:E D E96 42A24:E2 46 5 : 2E6D E96 FEAPE CAA6 C
D A=:42E E96 FEAPEG E2 6 CAA6 42 36 6DE 2E5 3J BF2E 56D:G5

(96G

- :DE96 FEAPEG E2 6 CAA6
- (:DE96 DH:E49: GBF6 4J
- :DE96 : 5F4E2 46 : 5F4E C 2 5 E96 EJA42=G2=F6 :D
- &%:DE96 FEAPE42A24:E2 46
- &%:DE96 FEAPEG E2 6
- :DE96 : APEG E2 6

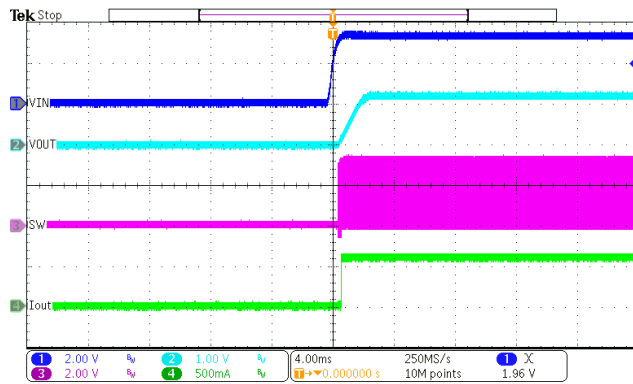
F6 E 42A24:E D 56 Q25: F 56C 3:2D E96 3:2D G E2 6 42 D : :42 E G5F46 42A24:E2 46 6Q :4
42A24:E D 42 =D6 DE E96:C42A24:E2 46 2EQE5 G E2 6 %96G G 62G6 2C: E96 G E2 6 QE E
6 DF6 256BF2E6 6 64E6 42A24:E2 46 %JA42=2 46Q :4 FEAPE42A24:E D H G C DE2AA=42E D

Table 2: Component List with Typical Output Voltage BOM list

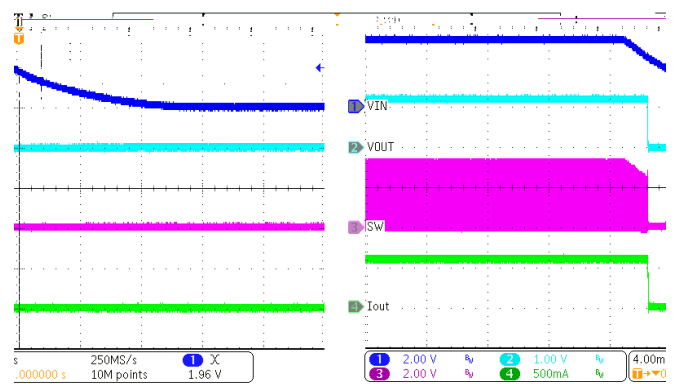
FE	&%		
		<	<
		<	<
		<	<
		<	<

Application Waveforms

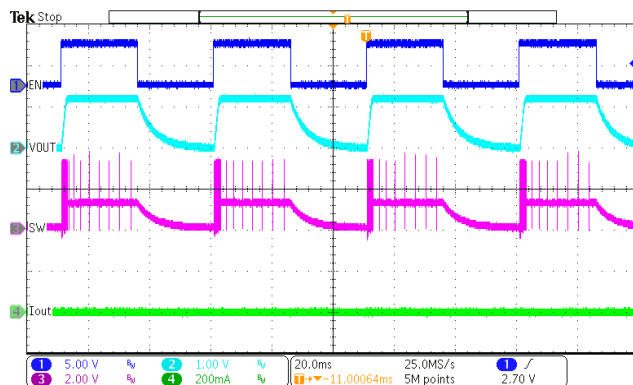
&% F 6DD B96H:D6 B5



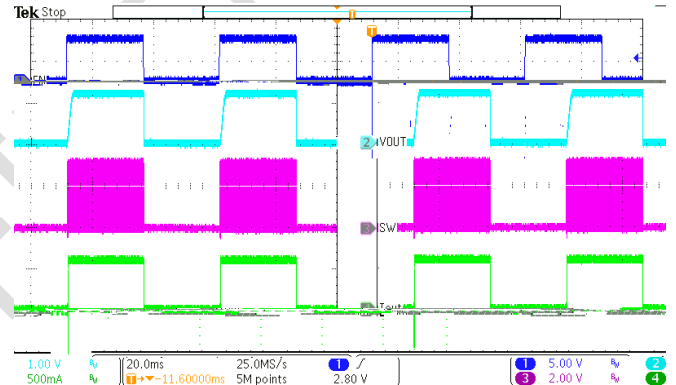
: F6 H6CFA



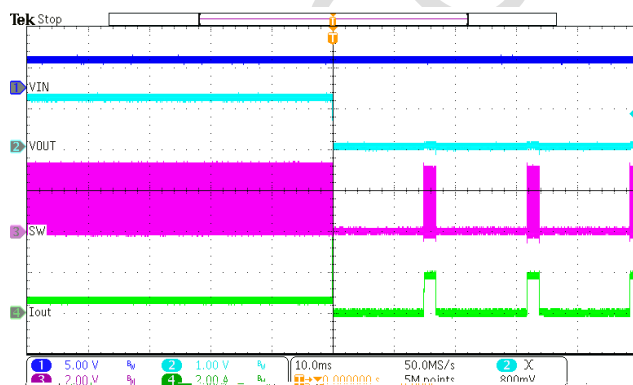
: F6 H6C5 H



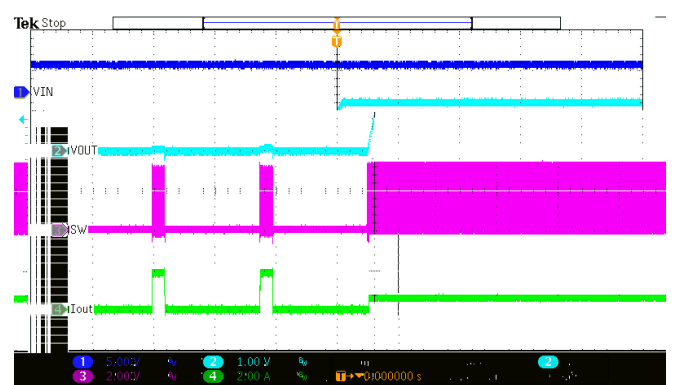
: F6 E 6



: F6 E 6

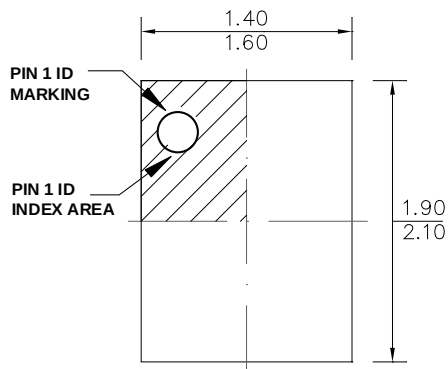


: F6 G6C F6 E C64E E 926D9 E

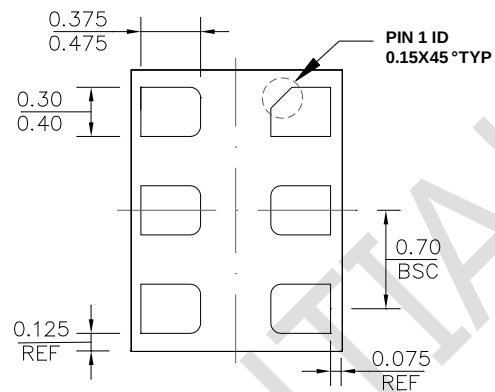


: F6 G6C F6 E 662D6 926D9 E

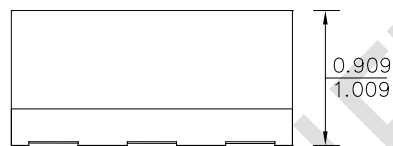
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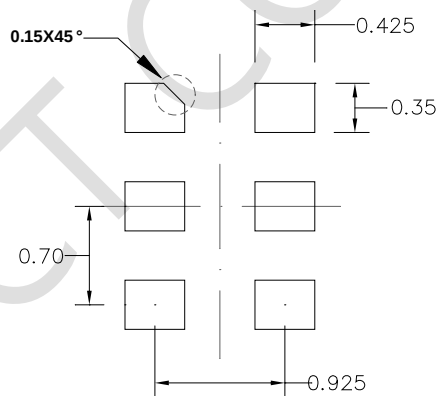
TOP VIEW



BOTTOM VIEW



SIDE VIEW



RECOMMENDED LAND PATTERN

NOTE:

- 1) ALL DIMENSIONS ARE IN MILLIMETERS.
- 2) LEAD COPLANARITY SHALL BE 0.10 MILLIMETER MAX.
- 3) JEDEC REFERENCE IS MO-303.
- 4) DRAWING IS NOT TO SCALE.

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NOTICE: %06: C 2E : B:D5 4F 6 E:DDF364EE 492 6 H:B FE E46 &D6DD9 F5 H2C2 E2 5 F2C2 B6 B6 B9:5
A2B B6=64F2= C A6B C 9B2C E: C 65 FA H96 : B C2E :4 B E%649 = J % AC5F4B: E 2 J
2AA=42E %H:= E2DDF 6 2 J 6 2=CDA D3:=B C2 J D2:5 2AA=42E D