

RL QJ 9HUNL = =
< V T(* VURV 6 * LU
= -LLKI HJR9LM LUWL =VSHNL
QJLNHLK T /INO: RL HUK T 3V
: RL 7V L 46: -,
-PLK- L LW 4/
7 SL: RP RN4VKL 7: 4 H 3INO 3VHK
(8 R JLU * LU RJ: SL 4VKL
U 4RPT T 6U FL
T QJLHS VM H FL
6 L LT LH L7 VLJRU
(HSI \$ RUHU : 6 37HJRN

QK PIS = +P P LK7V L)
7V L TLL
, \$ HV 73* : L V
(VTHR* W VS
(VTVPL

Q : * P H ONO ML LW V T(
JVRV V WOVV I JRJVL L 0CH
RL RJ VSHNL HRN MVT = V = QJO
RLNHL H T ONO RL 46: -, HUKH T
S' RL 46: -, Q : * HKV Q LHR
J LUTVKL JW VS POI BRJSV JVT LU HRU V
THRL Q JOP LH V L

Q : * MH L NPLK 4/ PJORN
ML LW QJO TRPTPL Q L L UHS VM JOP
H PLJVT VLU PLHUK LK JL Q V P \$
VILS' L CHU VM QJQ V P =
POHTRPT T U VU FL WONO RL 46: -,
Q : * HSY V L JVUL RUMVT ONORJ
VSHNL VS' V VSHNL

Q : * V Q 7 SL: RP RN4VK \$RU
7: 4 PO RHS (S' R JLU J LU 0
HJOP L V L LNRW H T(\$NO SHK
JVUKPRU

Q : * VM J JS I J VS KRCU

56 , 7HNLUTIL W L RV L PRU TH KPM MT HNLUTIL RQJ LU L RU

9L PRU 7 VK JRU

9L PRU * V LJ , 5 RUMWRUKL JP RURJ HNL

9L PRU < KHL LWRU J L HUKH SHRU HLMW T

9L PRU < KHL (): TH HSL

9L PRU (KK: HU RU (): LJ

9L PRU < KHL , 5 JVUN L <= 36 L\$ILK

9L PRU < KHL - R L

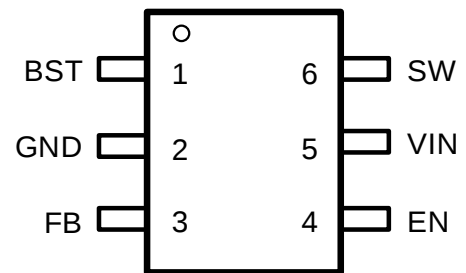
9L PRU < KHL + , = 0 , 69 + , 9 0-694 (05

9L PRU < KHL 7 (* 2 (. , 0-694 (05

: *	=) 9	H L 9LLS			: 6

Over operating free-air temperature unless otherwise noted ⁽¹⁾

DESCRIPTION	MIN	MAX	UNIT
VIN, EN	-0.3	47	V
BST	-0.3	54	V
SW	-1	47	V
SW <10ns	-2.5	49	V
BST-SW	-0.3	7	V
FB	-0.3	6	V
Operating junction temperature ⁽²⁾	-40	150	C
Storage temperature T _{STG}	-65	150	C



6-Lead Plastic TSOT23-6

(1) : L L IL VK O/L \$ LK UK (I VSL4HT T9HFNTH JH LKL BL L THLU KHTNL Q KL BL P UV N HHULLK V MW RUV RL WP 9LJVTTLUKL6 LHRU* VUKPU

(2) Q 0 RUSKL VL LT LH L VLJRUV VLJ Q KL BLK RNV L SHKJVUKPU 1 WPU LT LH L \$ LLLK * QUVL LT LH L VLJRUPHPL * VURV VLHRUHV L Q LJRKTHFT TVLHRNQWRU LT LH L \$ LK JL \$ LFL

) :		7V L SW Q ONO RL V L 46: -, NHLKPL 4 JVULJ H - V NLHL JL HTBJH HJPV IL LLU): RHUK: UKL
. 5+		. 5+
-)		) JRJVU L L V MLKIHR LU RN VSHL * VUULJ H L P V KPRL MT =6< V-) V L V VSHL Q KL BL LN \$IL -) V Q RL UHS LM LUW VM = RH\$

, UH \$ SNR PU CP PU V

, 5

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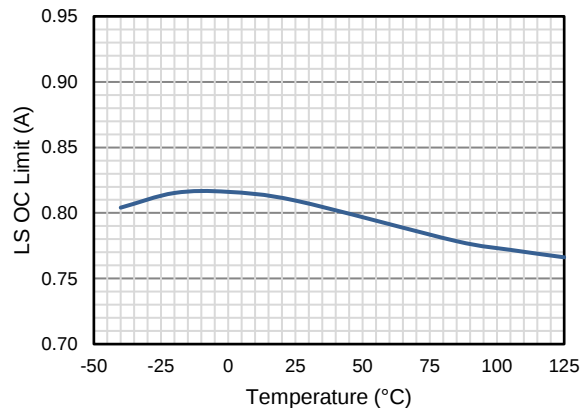
9+: 65F/	/ PNO PL -, VU L P HWL			T
9+: 65F3	3V PL -, VU L P HWL			T

\$ B S O L ñ ' i †!X# fí 'fvabt Žòq...f" Hi"#6" `HiA5"f y~ Žô " W`HiD~2& € ŽôP2!A20@HiH&"& € Žôf" W`HiQ...f"dy~ Žô ~b!A5v Žõe

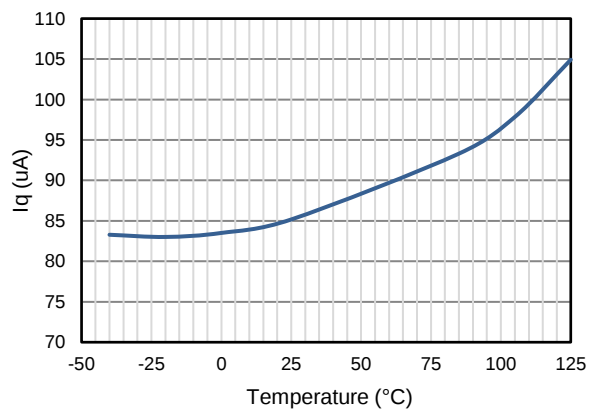
- R L , N P L U 3 V H K * L U = V =

- R L , N P L U 3 V H K * L U = V =

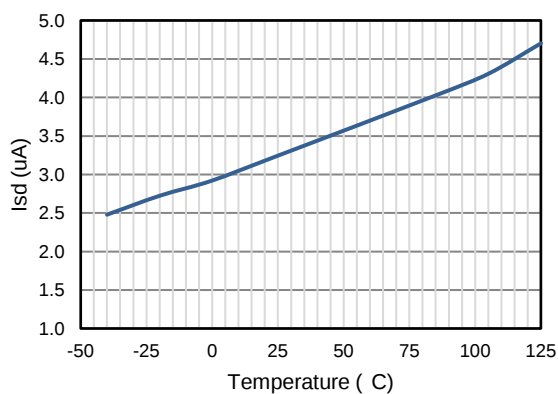
- R L



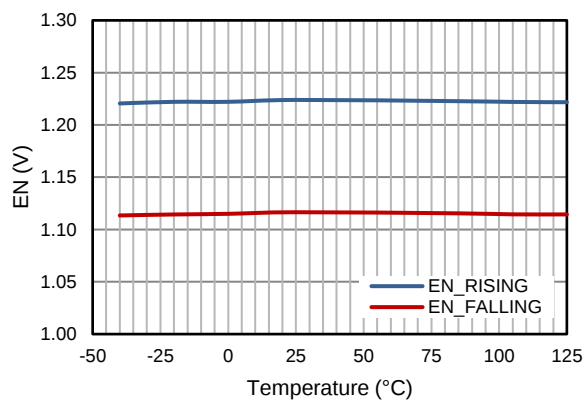
- IN L 3: * LU 3FP=: LT LH L



- IN L 8 P JLU * LU LT LH L = 5 =



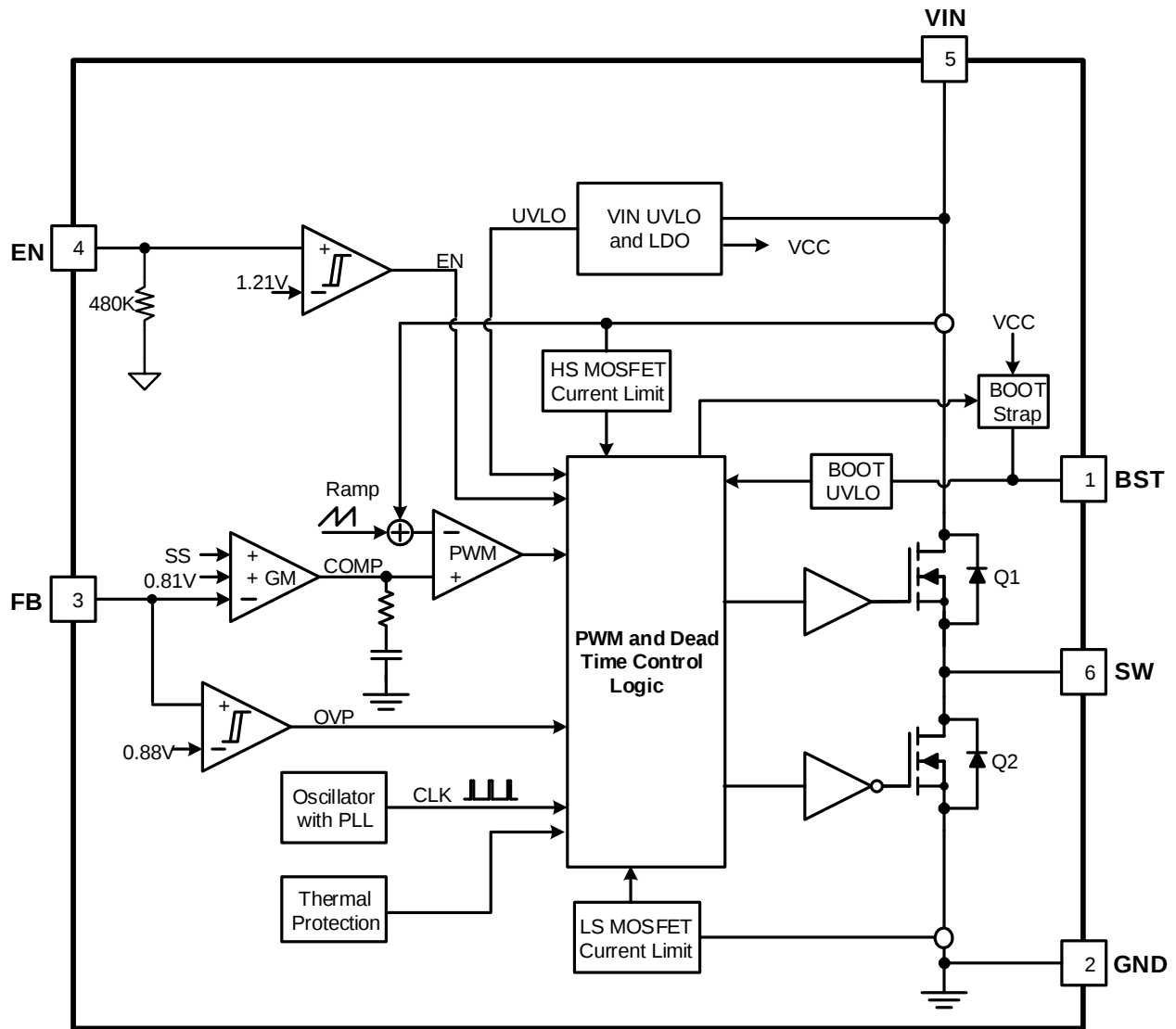
- IN L : O KV U* LU LT LH L =RU =



- IN L , 5 OL OVS LT LH L

- IN L = 5 <= 36 =: LT LH L

- IN L 6=7=: LT LH L



- IN L - W RUHS) SJR+PN HT

Q : * KL RL P = = RJ T(V MS RL NHLK WOWV I JRJVL L Q KL RL
LT S/ MPLKML LU LHRJ LU TVKL JVJ VS(U RL UHSJSJR PO 4/ ML LU RPHL URNVU
Q RL NHLK ONO RL V L 46: -, 8 RLHJOJ JS QURK JVJ LU PL SLHS HUK Q JV L L
JOHL V JH QU LULK VSHL WONO RL 46: -, LHRJ LU PRNHVL Q VSHL WRL UHS
* 647 LL MW RUHS SJRKPNHT Q KL RL U WONO RL 46: -, 8 HUK U VUS/ RL 46: -,
8 Q RK JVJ LU KLJHL Q U 46: -, 8 P 65 Q Q UL PRNLKNL WUSJRJ JS Q S/ RL
46: -, 8 U VM CP L LH VUJ JS I J JS IHLK

Q LHRJ LU TVKL JVJ VS PO Q RL UHS SV JVT LU HPUUL VRHUK Q I SRJ T VM H FT SM
Q : * MW RJ HUK TRPT PL Q VMJCP JVT VULU JV U 4LHU CR P LK JL Q L L UHS H PL
JVT VULU PLH LS

Q RLJU J LU VM * P (RHS UKL UV SHK HUK POV PJORN JVUKPVU Q UKPHI SN
Q KL RL Q S O KV UJ LU P VUS (Q : * VR H 7 SL: RP RN 4 VKL 7: 4 VM Q
RU LHL Q V L LMWRLW RJ NO SHK JVUKPVU

Q : * LT S/ MPLKML LU LHRJ LU TVKL JVJ VS(U RL UHSJSJR RPHL URNVU Q
RL NHLK ONO RL V L 46: -, 8 RLHJOJ JS QURK JVJ LU PL SLHS QU Q J LU OVNO
ONO RL 46: -, LHJL Q OL OVS LS L I Q * 647 VSHL WQL RL UHS V HT S/ Q ONO
RL 46: -, U VM Q WOWV S/ RL 46: -, 8 U VU S Q UL JSJRJ JS I LNRJ V Q
RK JVJ LU MHS V L V

Q L V HT S/ L L Q * 647 UKL I JVT HRN Q VSHL WQL -) RJ POHURJL UHS = LM LWL
VSHL QU Q SHKJ LU RU LHL H LK JRU RJ Q MLK HJR VSHL LSHPL V Q LM LWL HPL * 647
VSHL S Q H L HNL RK JVJ LU THJL Q RU LHLK SHKJ LU CP MLK HJRSV LSLN SIL Q
V VSHL V Q LM LWL Q KL RL HSV RL NHL HURJL UHS S/ L JVT LU HPUJJP P V L LU I
OHTVUR V JSRU QUK J JS PNLHL CHU MW HMLKML LU LHRJ LU TVKL JVJ VS

Q : * V LHL RJ 7 SL: RP RN 4 VKL 7: 4 POSNO SHKJ LU VFT V L LMWRLW QU Q SHK
J LU KLJHL HURJL TLU RJ Q MLK HJR VSHL SHK * 647 VSHL KV QU * 647 MHS VHS/
JSIT OL OVS T= RHS KL RL LUL 7: 4 Q V VSHL KLJH KL V V JH HJPV
KPJOHNPNK RN RP RN L RK 6 WL -) VSHL KV S/ L CHU Q LM LWL VSHL HUK Q * 647 VSHL
PL HVL S/ JSIT OL OVS QU ONO RL V L 46: -, U VU UL JSJR SL (M L LHS
PJORN JJS PO RHS T(LHRK JVJ LU * 647 VSHL KV HUK P JSIT LKHNRHUK SL
RP RNTVKL L LH RML V JVUJL NO SHKLK

CP JVJ VS JQTL QS HJCR RN ONO LMWRLW I RP RN JJS V LK JL PJORN V L S/ HUK NHL
K PL JOHNRN S/

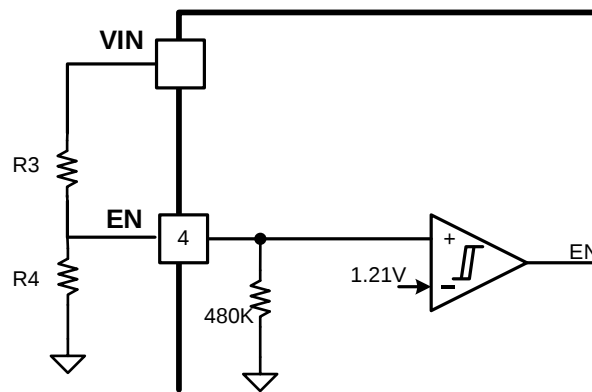
Q : * P KL RULK V V LHL MT HURJ VSHL S HUNIL LLU = V = H SH -
KLJV SNJL HT RJH P LJVT TLUKL VI H Q S UPL MQ RJ S SJHL TVL CHUHM
RUQ MT Q JV L L HUHKPVUHS SJ VS RV HUHSTI RJH HJPV V PO LJVT TLUKL - TH IL
L PLKRJHKKPVU V Q SJHSJL HT RJ H JH HJPV

Q: * <UKL =VSHL 3VJR6 <=36 KLMI S H OL OV&P RHS = PO=5 PRNHUK O KV U
OL OV&P = PO=5 MISN Q TVL HJJ HL <=36 OL OV&JHUIL WHTTLK OV NO Q LJPRU
LUH \$ OL OV&M, 5 R

QUH SRNH VSHL ORQ CHU Q, 5 ORQ OL OV& RHS = PRN Q: * LUH \$ HSMWRU
HUK Q KL RL H VM H CHL Q: * CH Q I SRU T VM H FTL V L LU Q V
VL OV HUK R OJ LU QU, 5 RP \$K\$ Q RL UHS: UL \$L KPJOHNLK VNV UK) JR
VL HRUP KPHI \$K QU, 5 VSHL MISILS P \$ L OL OV& RHS = MISN

(U RL UHS R \$KV U L P V THL, 5 RIMSRN O KV U Q: * -V Q H SHRU L PRN
ORQ =5 <=36 VSHL CHU Q KLMI S L JVULJ HUL L UHSL P V KPRL 9 HUK9 OV UR-RL
MT =5 V, 5 Q <=36 PRNHUK MISN OL OV&JHUIL JHS \$ILK I, HRU HUK, HRU
L LJPLS MQ L P UV L PLTU W Q =5 <=36 WHT JVULJ Q, 5 V=5 V FT \$M Q L L UHS
JPJ P

, 5 RP HONO VSHL RHUKJHUIL KPLJ S JVULJ LK V=5 VH VTHRHS H Q KL RL PO=5 PRN
VP RL UHS<=36 OL OV&



- RL (KQ H \$ =5 <=36

(1)

(2)

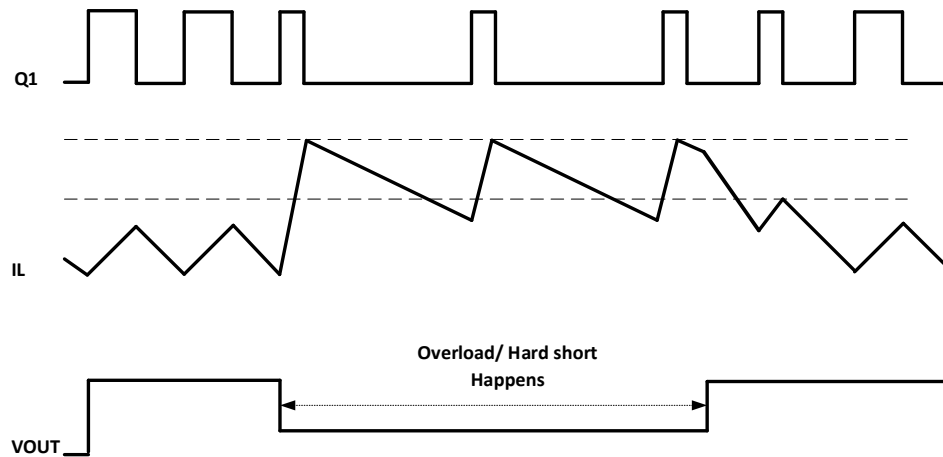
Q L

= PL =R PL OL OV& VLUH \$ Q KL RL

=MIS =R MISOL OV& VKPI \$ Q KL RL

Q: * LN \$IL Q RL UHS LM LWL VSHL H = PO VS HWL V L Q V L HRN
LT L H L HUK VSHL HUN Q V VSHL P L I H L P V KPRL MT Q V UML V Q -) R O
P LJVTTLUKL V L VS HWL V I L L L P V < L, HRU VJHS \$IL L P HWL WML P V KPRL
VF V L L W R W H \$NO \$HK \$INL HSL L P V HL LJVTTLUKL / V L L MQ HSL HL WONO
Q LN \$IV \$L TVL JL P \$ VUPL H WJ RNV VSHL HJJ HJ

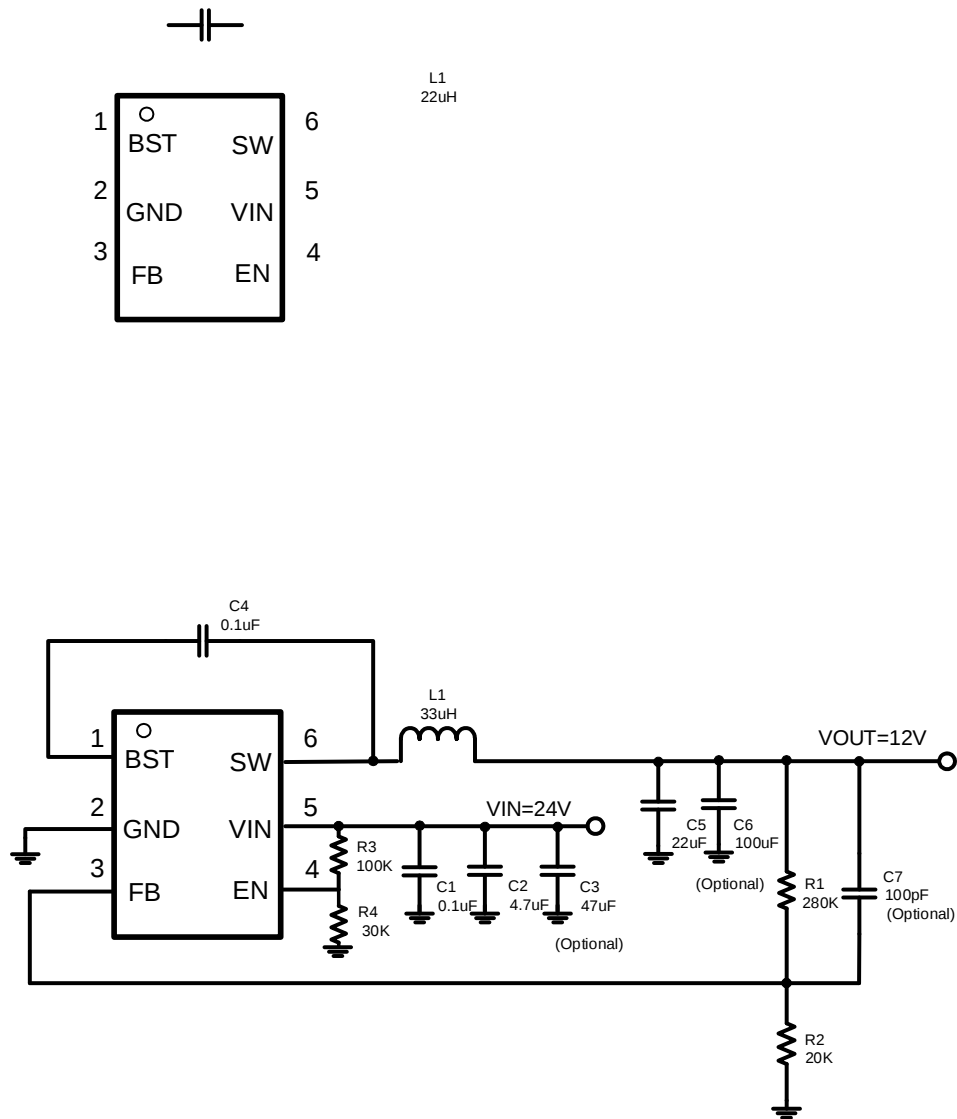
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- R L 6 L * LU 7 VLJ RU

Q : * FT \$TLU Q 6 L VSHL 7 VLJ RU 6=7 JPJ P VTRPL V VSHL VL OW K RN
 SHK HU RU LJV L RNMT V M SJVKPRUV \$NO SHK HU RU Q VL VSHL JVT HHV R 6=7
 JPJ PJVT HL Q -) R VSHL V Q RL UHSLM LWL VSHL Q U-) VSHL L JLLK VRL UHS
 = LM LWL VSHL Q QNO RL 46: -, U VMVH VR V VSHL JVUR L VRU LHL Q U Q
 -) R VSHL MISILS/ WQ = LM LWL VSHL Q QNO RL 46: -, JHU UVUHNH

6WL Q QWRU LT LH L R Q : * L JLLK °* Q Q THS LU RN JPJ P V JW L L
 PJONHUK L H PO Q QWRU LT LH L MISILS/ °* Q THS O KV U L LU Q KTHNL
 WKL RL K RNL JL PL QH HUK V L KP PHRUJVKPRU



Design Parameters	Example Value
Input Voltage	24V
Output Current	0.6A
Switching Frequency	1.2MHz
Start Input Voltage (rising VIN)	5.5V
Stop Input Voltage (falling VIN)	5V

Q V VSHL P L I HUL L UHSL P V KPIRL
9 HUK 9 RJ RSH H SHRU JQTHB
9LJVT TLUKL 9 L PHWL P 2 < L L HRU
VJHS SIL 9

Table 1. R₁, R₂ Value for Common Output Voltage
(Room Temperature)

=	2	2
=	2	2
=	2	2
=	2	2
=	2	2

Q L

=9, - P Q MLKI HJR LM LWL VSHL RSH
=

(UL L UHS VSHL KPIRL UL VRW9 MVT Q RJ V, 5 RJHUK 9 MVT, 5 RJ V Q NV UK JHU L Q
RJ VSHL <UKL =VSHL 3VJR6 <=36 OL OV\$ Q <=36 CH V OL OV\$ VUW V L QU
Q RJ VSHL P PRNHUK Q VQ W V L KV UV I V UV QU Q RJ VSHL P MSHN -V Q
L HT \$ KL RU Q S OV\$ UVUHK H PJORNWUL Q RJ VSHL RULHL HVL = H
VLUH\$ (M Q LN \$IV H PJORN P OV \$JVUR L VKV V U\$Q RJ VSHL MISIL\$ = V
V KPHI\$ < L, HRU HUK, HRU VJHS SIL Q HSL R HUK R W9 HUK 9 L P V

Q LHL L LHSWUV OV \$IL JVU RL LK RJ L\$JRNRK JV JOH RK JHUL H HRUJ LU Q
94: J LUHUK+* L PHWL +*9 3HNL RK JHUL L S R\$ RK JV J LU P \$HUK Q LWL \$HK
V\$ L V VSHL P \$ / V L L Q \$INL HSL RK JV HSH JV L VK VHINL O RSH PL
ONQ L R L PHWL HUK\$ L H HRUJ LU (NAK \$W KL L TRRN Q RK JHUL V LP VHS/
Q RK JV LHR V LHR P \$ J LU VILH VTHLS VML TH FT TV J LU

Q LHR V LHR P \$ J LU RJ Q RK JV Q₇₇ JHUL JHS SILKH RJ, HRU

Q L

Q₇₇ P Q RK JV LHR V LHRJ LU
3P Q RK JHUL WRK JV
M P Q PJORNML LU
=6< P Q V VSHL
=6 P Q RJ VSHL

: RUL Q RK JV J LU P \$ RULHL PO Q RJ VSHL V Q TH FT T RJ VSHL RJH SHRU P
HSH LK VJHS SIL Q TRFT T RK JHUL L PLK < L, HRU VJHS SIL Q RK JHUL HSL

Q L

346 P Q TRFT T RK JHWL L PLK
M P Q PJORNML LU
=6< P Q V VSHNL
=6 TH P Q TH FT T RJ VSHNL
Q< TH P Q TH FT T +* SHKJ LU
30 P JVLWPU WQ77 VQ<

Q VHSJ LUM RN OVNO Q RK JVP Q RK JVP P \$ J LU S Q V J LU QUL\$JRN
HURK JVP JOWLP HLKJ LUL LJPIS Q H HPUJ LU \$INL CHUP LHRV LHPUJ LU HUK
94: J LU HSVUVIL L JLLKL Q LWL Q LHR PJORN J LU WPK JVP Q7,(2 HUK Q94: JHUIL
JHS SILKH RL HPU HUKL HPU

—

—

—

Q L

Q7,(2 P Q RK JV LHRJ LU
Q< P Q +* SHKJ LU
Q77 P Q RK JV LHR V LHRJ LU
Q94: P Q RK JV 94: J LU

QVL SHKRN V SHK HUPU JVKPU Q RK JV LHRJ LU JHURULHL V Q PJOJ LU \$TPVM
QKL RL CROP RBS (Q TV JWUL HPLH VJOP VJOWLHURK JV POH H HPUJ LU
HRNNLHL CHU () L JH L WQ TH FT T Q7,(2 \$PLKI KL RL Q TH FT TV J LU CH Q
:* JHUK\$PL HSVKL LUK WU Q RK JV J LU P \$ O Q TH FT TKL PLKV J LU HSV
HUIJ Q L\$JPUWPK JHWL Q TH\$ RK JV L S R\$INL RK JV J LU P \$ \$HKRN VHONQ
TH FT TV J LU

/ RK JV HSL P LJVT TLUKLKW = V VSHNL HUK / RK JV P LJVT TLUKLKW = V
VSHNL

Q RJ J LU V Q L KV U+++ JWUL L PKPJWU V Q L W L P L PL HJH HJPV V S Q
(* J LU V Q L KV U+++ JWUL L Q\$ THRUHURN Q +* RJ VSHNL < L JH HJPV POS ;: 9
WIL L L W THUL * L HTR JH HJPV PO 9 V 9 KESJ R HL HS NNL LKILJH L WQ L P S
,: 9 HUK TH\$LT LH L JVLWPU HUKPP VNS LJVT TLUKL V L HUV Q S L HSL JH HJPV LN
- PO TH\$ HURNL PL VNL ONOM LU PJORN WPL 7\$UL Q TH\$ PL JH HJPV H
JSV L V=6 HUK. 5+ RJ H V P\$

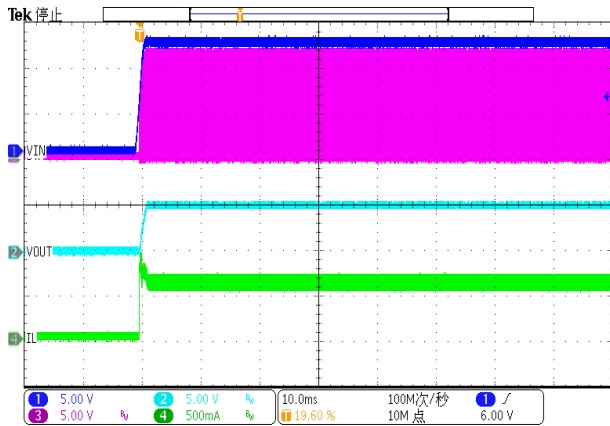
Q VSHNL HRN WQ RJ JH HJPV T ILNLHL CHU Q TH FT T RJ VSHNL (UK Q JH HJPV T
HSVCH L H P \$ J LU HRNNLHL CHU Q TH FT T RJ J LU P \$ Q 94: J LU RJ Q RJ
JH HJPV JHUIL JHS SILK RN, HPU

—

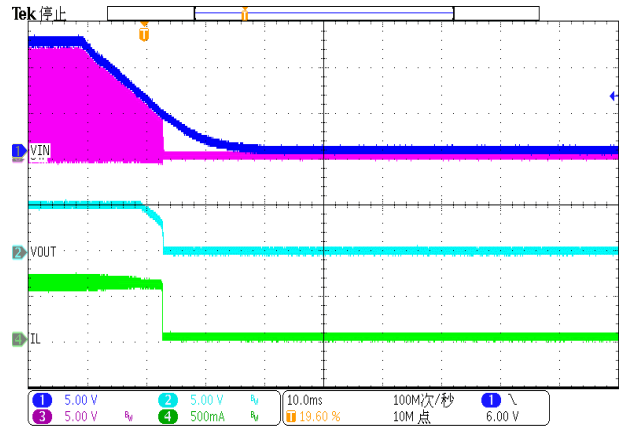
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Q V JH L JVKPU VJJ H=6 =6< Q L

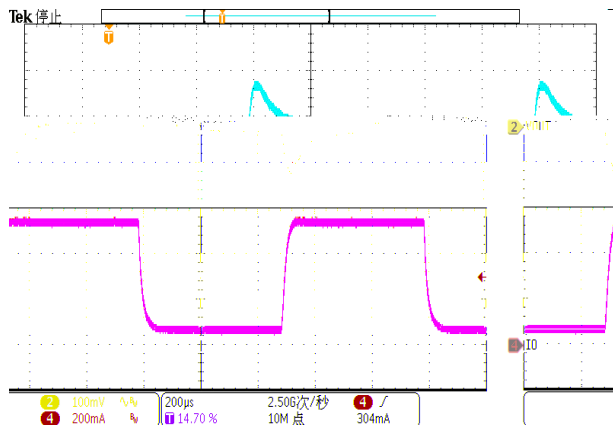
<US VQ PLUVLK Q LMS RNJVUKPRU H S =RJ = =6< = - : R/



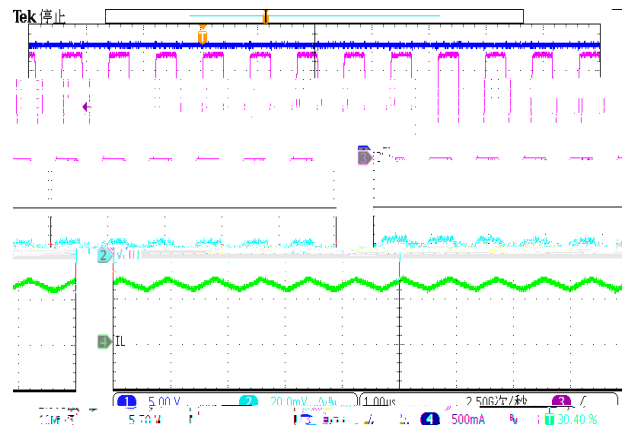
- RL 7V L



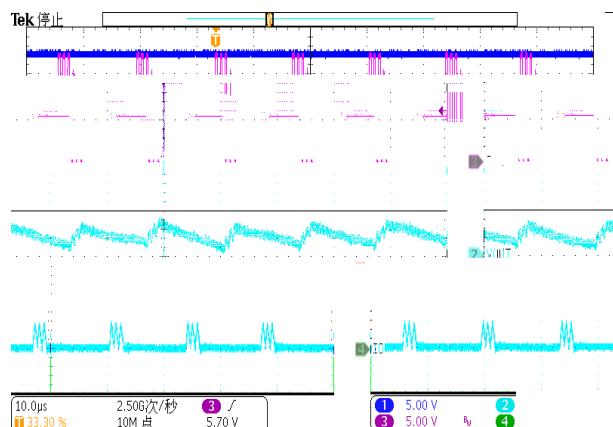
- RL 7V L KV U



- RL 3VHK HU RU ((T(



- RL : HUK=V 9P \$ 0V (



- RL : HUK=V 9P \$ 0V (



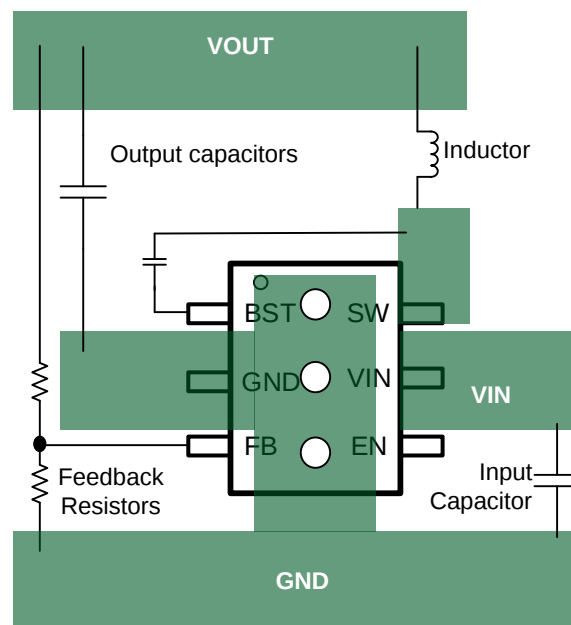
- RL Q L THS =G =V (

-V TVL RW THRU RWLU JVT : RWU*VULU LJQVSN *V 3K (\$9NO 9L L LK

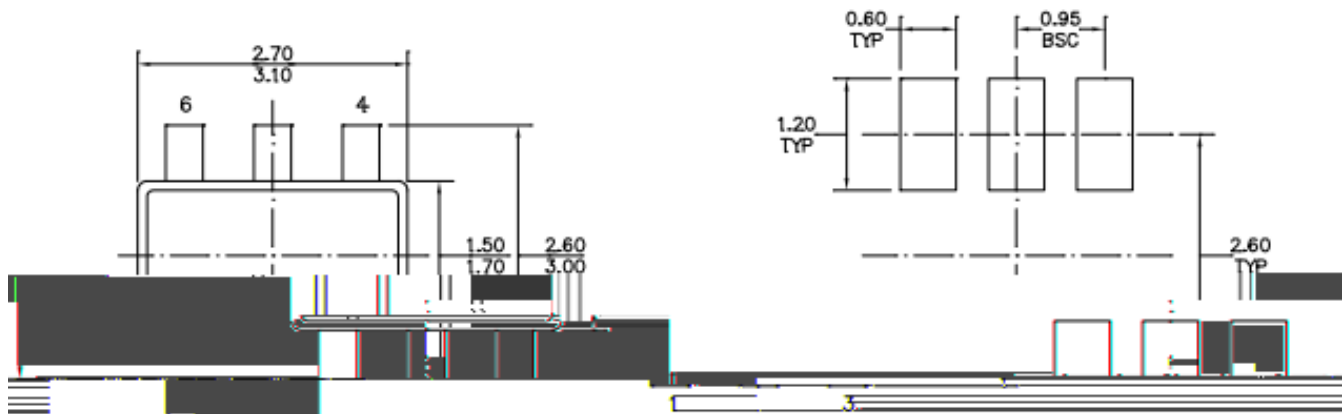
7 VK J -VSL 3PR : *

Q LN \$IV JV \$ M MVT R H HUKUPL V \$T POV JHLM\$ \$IV VM7*) 9HKPIRU VMONO
ML LW UPL RK JL , 40 V VL \$IV VML ONOML LW PJON HOPL LUPIS

1. 4 RFTPL Q \$UNOHUKHLHVMHS HJL JVULJLK V Q: R HUKHSH LHN VUK \$UL UKL Q
PJON LN \$IV VTRFTPL JV \$N
2. Q R JH HJPV ULLK VIL L JSV L V Q = 5 R HUK. 5+ R V LK JL Q R S P \$ 7\$UL
HSV , : 9 JL HTB JH HJPV H JSV L V = 5 R HUK Q NV UKH V P \$ V LK JL HH P \$ L M J
3. 6 RK JV OV \$IL \$ULK JSV L V Q: R Q HLHVMQ 7*) JVUK JV TRFTPLK V L LU
L JL PL JH HJPPL JV \$N
4. Q \$IV ULLK ILKVUL PO L\$WU RL HPUVMQ Q THS(\$INL V \$IL NV UK \$IL RNT SP\$
Q THS P LK VFT VL Q Q THSKP PHRU Q IV VT \$IL PH \$INL NV UK \$UL JVULJLK V
Q V \$IL NV UKI P



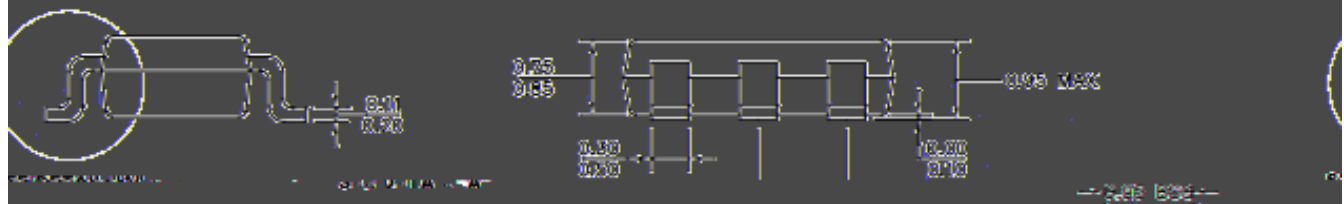
- R L 7*) 3H V , HT \$



COMMENDED LAND PATTERN

TOP VIEW

REC



SIDE VIEW

FRONT VIEW

NOTE:

- 1) ALL DIMENSIONS ARE IN MILLIMETERS.
- 2) PACKAGE LENGTH DOES NOT INCLUDE MOLD FLASH, PROTRUSION OR GATE BURR.
- 3) PACKAGE WIDTH DOES NOT INCLUDE INTERLEAD FLASH OR PROTRUSION.
- 4) LEAD COPLANARITY (BOTTOM OF LEADS AFTER FORMING) SHALL BE 0.40 MILLIMETERS MAX.

5) POWER SO4 WITH 1.27MM PITCH, 0.65MM LEAD PITCH, 0.31MM LEAD PITCH, 0.20MM LEAD PITCH, 0.31MM LEAD PITCH, 0.20MM LEAD PITCH, 0.31MM LEAD PITCH, 0.20MM LEAD PITCH.

6) DRAWING IS NOT TO SCALE.

DETAIL A

