

REVISION HISTORY

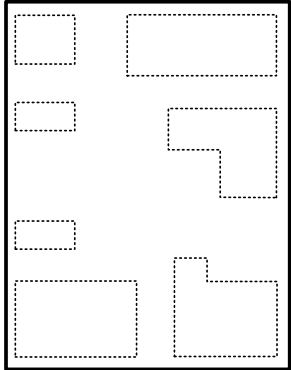
E6+ARXV_f SVad WcadVgZfd dVgZ_d Rj UZWcW aRXV_f SVad Z_eV Tf adV_egVadZ_
 CVg +CVVRdVe Rc Ve
 CVg +FaURaV56G:46 C56C: 7 C 2E:
 CVg #+FaURaV CVT V_UUJ 4 a _V_eDVVTZ_dR_UCVT V_UUJ 73 CVdZe cCR_XV
 CVg +FaURaV faefeg dRXVCR_XVR_UE2A6 2 5 C66=: 7 C 2E:

DEVICE ORDER INFORMATION

1 1 & 1 .	2 -) 0)	2 0 & 1 &	2 0	2 1)	
D4E## =F2 C	ERaV CW	&	(	(= 64 = 82 # & i (	.

ABSOLUTE MAXIMUM RATING

gVc aVRZ_XWVRZdV aVRdVf_Vdd eVch dV_eU

1 .	1 0)	0	PIN CONFIGURATION 
G:	e *	G	
G _{DH}	e *	G	
G _{DH} - _d	# & e #	G	
G _{3DE}	G _{DH} e G _{DH}	G	
G ₇₃	e &	G	
G ₆	e &	G	
E #	% e #&	°4	
E _{DE8}	& e &	°4	D4E## E a GZh # & i (

DeVddVd SVj _UeY dV dVdUf_UVc2Sd fV Rj Z f CRZ_X Rj TRfdVUVgZV aVc R_V_eUR RXV EYVUVgZV d_eXfRd_eWUe
 W_TeZ_fedZV Wd CVT V_UUJ aVRZ_4_UZ_d
 # EYV:4 ZTfUvd gVceV aVRdVfV ac dTeZ_e ac dTeVUVgZVUf cZ_X gVc RUT_UZ_d f_TeZ_eV aVRdVfV h Z V TWU & 4
 h YV_gVceV aVRdVfV ac dTeZ_d RTgV 4_e_f fd aVRZ_RS gVdVdaVTZU Rj Z f aVRZ_X f_TeZ_eV aVRdVfV h Z
 dUfTV dVZ V

PIN FUNCTIONS

0	2 0	2 0 (0 1 0
G FE		A h Vc fæfe a VRdVfdVRd RcXVR_ fæfeTRaRTæ cRd a ddS Ve dUf TV fæfeg æRXV cæa V.
73	#	3fT T_gVæVc fæfeWUUSRT dV_dZXg æRXV 4 __VTeR dVdæ cUgZVcW G FE e 73 e dVefa fæfeg æRXV EYV UVgZV dXf Ræd 73 e eYV ZæVc_R dWdV_TV W)G ejæZR
6		6_RSV XZ Zafe EYVUVgZV YRd adVTæZ _V_RSVeYdY Ud #G æZ_X #G Wæ Z_X Wcac XdR RSVFG= eYdY UR_U Yj dæVdæZ
3DE	%	A h Vcdf aa j WceYVYZY dZV a h Vc D76E XRe/UcæVc fdeT __VTeR 7 cXcRæVc TVR Z TRaRTæ cSVh W_3DE aZ_R_UDH _UV
DH	&	A h VcDh æTYZ_X fæfe DH æ eYVdh æTYZ_X _UVeYRedf aa æd a h Vce eYV fæfe e/ eYReR TRaRTæ cæ dVbf æUW DH e 3DE e a h VceYVYZY dZV dh æTY
G:		A h Vcdf aa j Zafe G: df aa æd eYV a h Vce eYV:4 Rd h V Rd eYV dæ/a U h _T_gVæVc dh æTYVd 5cæVG: h æYR%#Ge) &G a h Vcd fctV 3jaRdd G: e 8 5 h æYRdf æRSj RcXV TRaRTæ ce VZ ZæV _æV _eYVZafee eYV:4 DW:_afe4RaRTæ c
A8 5	(	A h VcXc f_U fdeSVd UVæMUZæTej e Xc f_U aR_V

RECOMMENDED OPERATING CONDITIONS

gVc aVæReZ_XWVRæV aVæRæV dVæ XVf Vdd eYVh æV æU					
2 4 4	& (0 1 0			0	0
G:	:_afeg æRXVæR XV			%#	) & G
E	aVæReZ_X f _TeZ _æV aVæRæV dV			%	#& 4

ESD RATINGS

2 4 4	& (0 1 0			0	0
G6D5	9f R_3 Uj UV 93 aVc2 D: 6564 D # %daVTæReZ _R aZd			#	# G
	4 YRæXU5VgZV UV 45 aVc2 D: 6564 D # # %daVTæReZ _R aZd			&	& G

ELECTRICAL CHARACTERISTICS

G: .) &G E . % 4 #& 4 ej aZR gRf Vd RôV ð/dðU f UVc#& 4

1.	2	1	10& 10	0 2	0
2	1				
G:	aVRe_Z_Zafeg ðRXV		%#) &	G	
G: PFG=	:_afeFG= 9j ðð/dðZ	G: ðZ_X	% &	G G	
:D5	DYfðJ h _Tf ðV_e	6 . RU G: .) &G	*	2	
:B	B f ZðTV_eTf ðV_e	6 . #G RU dh ZTY_Z_X G: .) &G 3DE DH . &G	# &	2	
G6 P9	6_RS V YZYeYðdY U		#	G	
G6 P=	6_RS V h eYðdY U		#	G	
2	1 (				
C5D P9	9 ZY dZV 76E _ ð/dZðR_TV		&		
C5D P=	= h dZV 76E _ ð/dZðR_TV		#%		
(					
G73	7VUSRT G ðRXV	E . #& 4 44	())) #	G	
:=: P=D5	=D5 gR Vj Tf ðV_e Z Z		# % # %	2	
(					
7DH	Dh ZTY_Z_XWbf V_Tj	G: .) &G G FE. &G	#	9	
e P :	Z_Z f _eZ V		(	_d	
e 77P :	Z_Z f WZ V		##	_d	
ðD	:_e/c_R d WðReeZ V			d	
2					
Ed5	EYVc R dYfðJ h _eYðdY U 9j ðð/dðZ	E ðZ_X	&& #&	4	

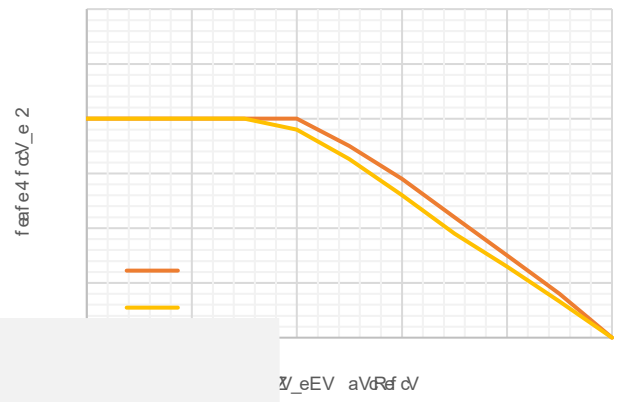
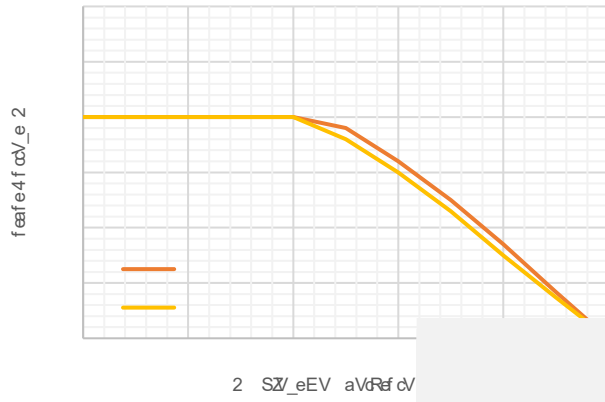
TYPICAL CHARACTERISTICS

$$7 \text{ Zf dV } 6 \text{ WZ/Tj gd} = \text{RU 4 f } \alpha \text{V_e G: . (\#G}$$

$$7 \text{ Zf dV / \#} = \text{RU CVXf ReZ_ G: . \&G}$$

$$7 \text{ Zf dV}$$



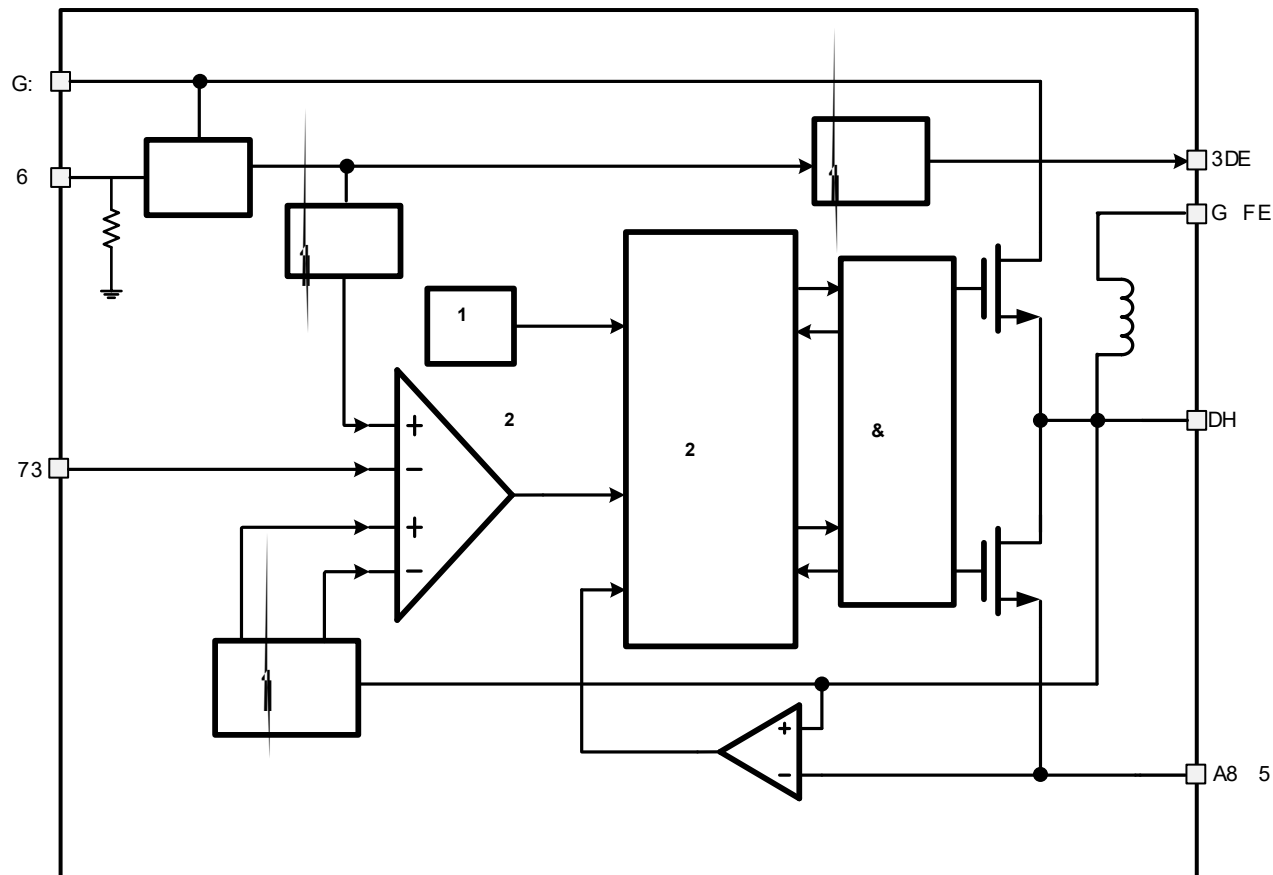


7 $\frac{dV}{dV_{ref}}$ (EYVc R 5V) $\frac{dV}{dV_{ref}}$ G FE.

$\frac{dV}{dV_{ref}}$ G FE. G 2. 4 H

7 $\frac{dV}{dV_{ref}}$

FUNCTIONAL BLOCK DIAGRAM



7Zf d/ 7f_TeZ_R 3 T 5RXdR

OPERATION

1

EYVD4E## UVgZV d%#) &G Zafe #2 faefedj_TYc _fddeVaU h_T_gVc/c Uf Vh ZY Zc/c_R a h Vc
D76Ed 2URaegVT_dR_e _eZ V 24 E T _ec dV a jVUe ac gZV/VdeR dZ/ecVda_dVR_UVRdj a
deRSZZReZ_ 2eeV SVXZ_ZX WRTYTjTV eYV YZY dZV D76E d f c_WU _WcR/VWU _VdY eeZ V _eZ V
aVcZU EYV _VdY eeZ V d TRTf ReUSj eYVT_gVc/cd_Zafeg dRXV G: R_UeYV faefeg dRXV G FE TjTV
Sj TjTV SRdUe RZ_eZ RadVfU VZVU WbfV_Tj gVceV_Zafeg dRXV dR_XV YV_TV_Z d TR WURURaegV
eZ VT _ec D4E## d f c_d WYZY dZV D76E R/Vc/eV/VWU _eZ VR_U d f c_d _eYV h dZV D76E
D4E## d f c_d W/V h dZV D76E TVeYV faefeg dRXV Uc aaVUSV h eYV faefed/Xf ReZ _eYV _V
dY eeZ VceYV_dVdeR_UeYV YZY dZV D76E d f c_WU _RXRZ_EYV _eZ V d ZgVdVj ac a eZ_R e eYV
Zafeg dRXVR_Uac a eZ_R e eYV faefeg dRXV :eTR_SV TRTf ReUfdZ_XeYVW h_ZXVbfReZ_ +

$$e \frac{G_{FE}}{G_{fs}}$$

H YVc/+

G FE d eYV faefeg dRXV
G: d eYV_Zafeg dRXV
W d eYV dh dTYZX WbfV_Tj

2WcR_ eZ VaVcZU eYV dXf Re cX Vd Ze eYV 77 eZ VaVcZU EYV 77 eZ VaVcZU V_XeYUaV Ud _G73
Z_ deTRdVd :eh Z V_Uh YV_eYV73 g dRXV/UNTdRdVd SV h)G Reh YZY a_ZeeYV eZ VaVcZU d ecZXVdU
:W/V 77 eZ VaVcZU d Vdd eYR_eYV ZZ f 77 eZ V eYV ZZ f 77 eZ Vh Z SVRaa ZU h YZY d Rc f_U
_d ej aZR

2

2

EYVD4E## d UVdZ_WU h ZY A h VcDRgV UV AD Re ZYe RU T_UZ_d WcYZY a h Vc W/Z_Tj EYV
dXf Re cRfe ReZR j dUf TVd eYV dh dTYZX WbfV_Tj R_U V eYV Ud E W/V YZV _E _TYR_XZ_X Uf cZ_XeYV ZYe
RU T_UZ_e XVeYZY W/Z_Tj R_U h faefed a V 2deYV faefed f cV_eUNTdRdVd W YVRgj RU T_UZ_
eYV_ZUf Te cTf cV_eUNTdRdVd Rd h V VgV_dR j_VRcZ_X Vc Tf cV_e eYV d eYV S f URj SVh W_44_R_U
54_EYV h dZV D76E d f c_WU W/V YV_eYV_ZUf Te cTf cV_e dRTYVd Vc VgV EYV RU d ac gZMU _j
Sj faefed TRARTe c h YV_73 g dRXV d h VceYR_)G eYV_Ve TjTV SVXZ_d H YV_eYV faefed f cV_e
ZTcRdVd W ZYee YVRgj RUeYV dh dTYZX WbfV_Tj ZTcRdVde Wa faefeg dRXV EYV eR_dZ_a_Zee
ZYe RU aVReZ_TR_SV TRTf ReUfdZ_XeYVW h_ZXVbfReZ_ # +

#

H YVc/+

E d _eZ V

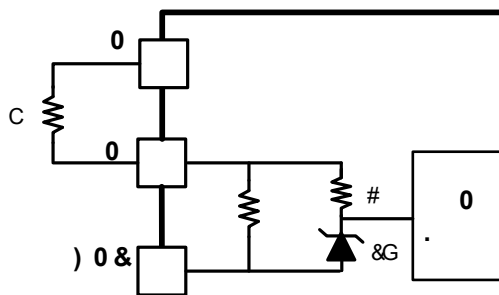
0 2

EYVD4E## d UVdZ_WU e aVRe/V R_Zafeg dRXV df aa j dR_XV SVh W_%#G e) &G Re VRde f7
UVT fa_ZXTvR d TRa d cVT V_UWUe Sj aRdd eYV df aa j _dV :W/V_Zafedf aa j TRdVd cV eYR_R Wh
ZTYVd W eYVT_gVc/c_R_RUZZ_R VVTec j eZ cR dRf Sf TRARTe c ch dTY dT V_UWU f7 Rj SV
dVbf ZU_Z_RUZZ_e eYV TR TVdR d Sj aRdd TRARTe d

EYVD4E## F_UVcG eRXV= T fe FG= UWf edeRaf aeYcdY U d ejaZR %Gh ZYG: cZXR_UdYf d h _
eYcdY U d (Gh ZYG: W Z_X EYV dV RTTf d eV FG= eYcdY U TR_SV ac XdR W eYc f XY eYV adVT dZ _
V_RS VeYcdY U V6 aZ

H YV_Raa j ZXRg eRXVYZVceYR_eYV6 YZYeYcdY U ejaZR #G dV eYVD4E## V_RS VdR W_TeZ_d
R_U eYV UVgZV deR d d W deR e a YRdV EYVD4E## YRd eYV Sf ZeZ d d W deR eZ V e adVgV_eeYV f e f e
gVcdY eR_U Z d d Y Tf aV_e H YV_6 aZ d af VU h eYV ZeVcR DD_Veh Z SV U dTYR dXUe Xc f_U 3fT
aVdReZ_ d U dRS VUh YV_6 g eRXV W d SV h d h VceYcdY U ejaZR j #G W

2_ZeVcR dVdZe cW 6 e 8 5 R h 6 WRee dYfeU h_eYVTY d 6 d TR aUJ ZeVcR j fdZXR &G
dVcd UZUV 7 cRaa ZReZ_d h YVdVR daVT dUUG: FG= g eRXV_WUd e SV dVe 6 T__VT d R dVdZe cC e
G: e Wc Rg eRXV U dZVch ZYR dVdZe cZ dVVeYVTY d WceYVT _W f dReZ_ V6: FG= g eRXV Rd dY h _
Z_7Zf dV EYV dVdZe cU dZeS f e cC d TR Tf ReU Sj 6bfReZ_



7Zf dV 2Ufd eRSVG: FG=

%

H YVdV+

GdeR e+GZ cZ VeYcdY Ue V_RS VeYVUVgZV
Gde a+GZ W eYcdY Ue U dRS VeYVUVgZV
G6 c. #G
G6 7. #G
C.

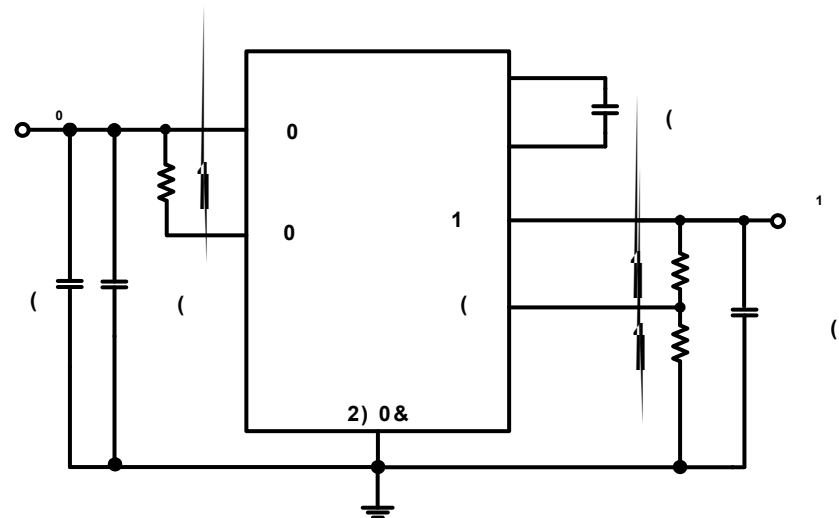
1 2 1 2

:_VRTY dh dTYZXTj TV eYV_ZUf Te cTf aV_e dV_dU Sj _Z cZ_XeYV h dZV D76E Uf cZ_XeYV 77 aVcZU
H YV_eYVg eRXV SVh W_8 5 aZ_R_UDH aZ d h VceYR_eYV gVcTf aV_eeYcdY U g eRXV eYV 4Ah Z SV

4

TV eV f TeZ_e/ aVRe dV Z_eV D4E## M TWUd && 4 eV eVc R dV_dZX TZf Z de ad T_gVd/c
dh ZTYZX R U dVdRe h ZY eV f TeZ_e/ aVRe dV V Z XSV h 4 EYVc R dYf d h _adVg_d eVUR RXV
UVg ZVUf c Z X V TVdd ZV YReR U a h VcUZd ZReZ T UZ

APPLICATION INFORMATION



74VHC00N

& 2

& 2	
:afeG RXV	) &G
fæfeG RXV	G
fæfe4fæV_e	#2
Dh æYZ_X7cVbf V_Tj	# 9
fæfeg RXV æa V aVR e aVR	#& G
EdR_dæ_eCVda _dV æ2 e æ2 RU dæ/a	G fe. # G

7 cX UZafeg eRXVWcZX TY dV h 6DC TVR Z TRaRTZ d 2 TVR Z TRaRTZ c 7 d dT V_UUJ
WceV UVT faZX TRaRTZ cR_U R 7 TVR Z Sj aRdd TRaRTZ c d dT V_UUJ e SV aRTUJ Rd T dV Rd
a ddS Ve eVVG: aZ WeVD4E##

FdV6bfReZ_ & e TRTf ReVeV_Zafeg eRXVcZa V+

&

H YVdV+

4: d eV_ZafeTRaRTZ cgRf V

W d eVT_gVcVcdh dTYZXWbf V_Tj

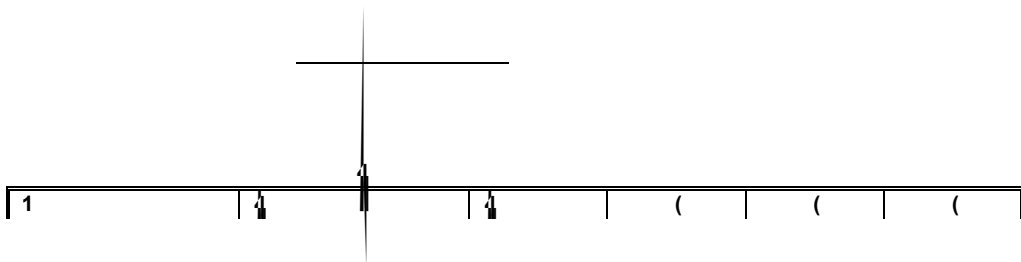
: FE d eV R Z f RU Tf dV_e

5 fVe eV_ZUf Te cTf dV_ecZa V eV_Zafeg eRXVTVR_XVd dVcV d aRdRdZ ZUf TeR TVR_U dVdZ dR TVSVh W_
eV a h Vcdf aa j R_U eVVG: aZ :e d dT V_UUJ e YRgVV_fXY_ZafeTRaRTZ TVe R VeV_Zafeg eRXV
cZa V Vdd eYR_ G 8 V_VdR j R #&G f7 ZafeTVdR Z TRaRTZ c d dT V_UUJ Wc de WRaa ZReZ_d
4 Y dV eV cZYe TRaRTZ cgRf V TRdW j h dY T_dZVcZX YZY TRaRTZ TV TVR Z TRaRTZ d 54 SZd WWT
h YZY YRd R d c_X_ZWV_TV_eVWR WWTegV TRaRTZ TV

2 7 TVR Z TRaRTZ c fdeSV T VTaU SVh W_3 E aZ_R_U DH aZ Wc ac aVc aVdReZ_ 2 TVR Z
TRaRTZ ch dYI &C cSVcVcX dUVUZ/VTeZ d dT V_UUJ EYV TRaRTZ cdY f U YRgVR G cZYVcg eRXV
dReZ_X

1 (1 &

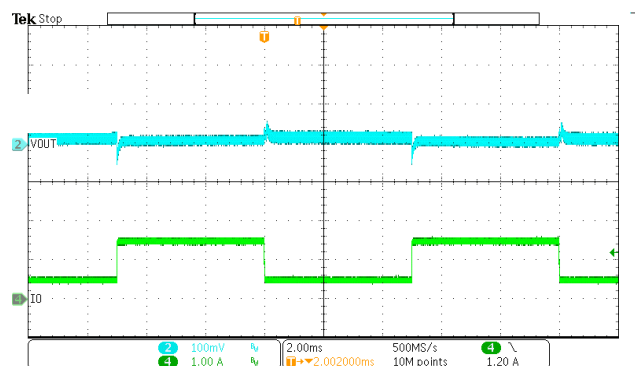
EYVD4E## WRf dVd M eVc_R ac XdR RSV feafeg eRXV Sj fdZX R dVdZe cUgZVc_Vh c C R_U C# Rd
dY h _Z_eV e j aZR Raa ZReZ_TZTf Z7Zf dV FdV VbfReZ_ e TRTf ReVeV dVdZe cUgZVcgRf Vd



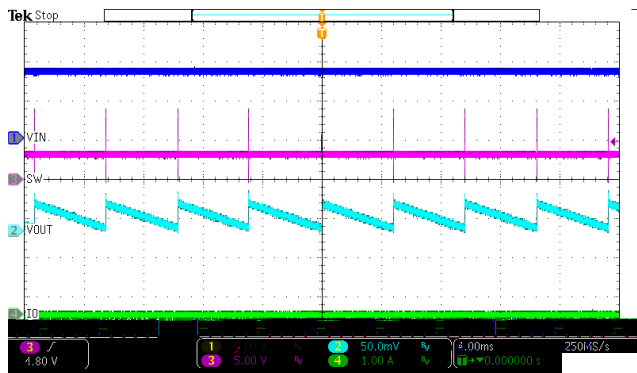
GZ.) &



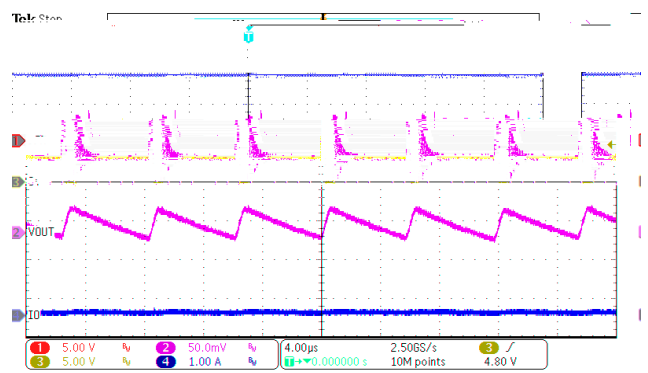
7Zf dV * = RUEdZ_e #2)2 2 fd



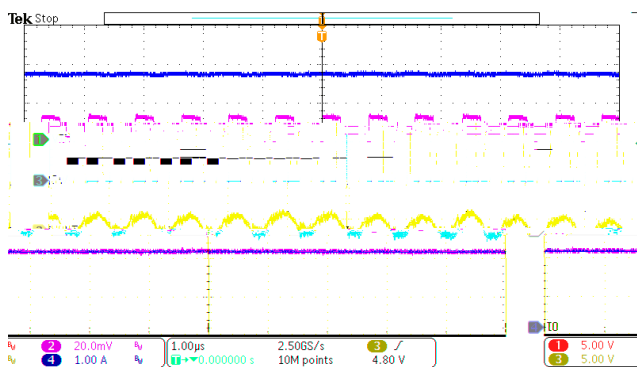
7Zf dV# = RUEdZ_e &2 &2 2 fd



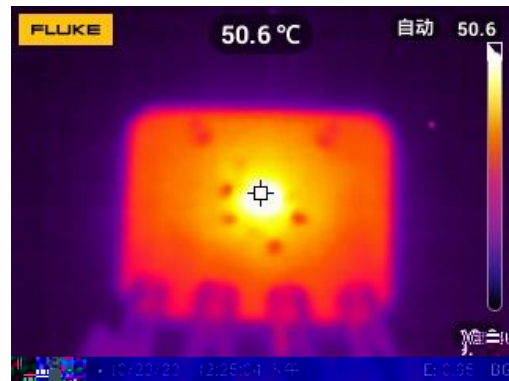
7Zf dV# fæfeCZa V : RU. 2



7Zf dV## fæfeCZa V : RU. 2



7Zf dV# fæfeCZa V : RU. #2

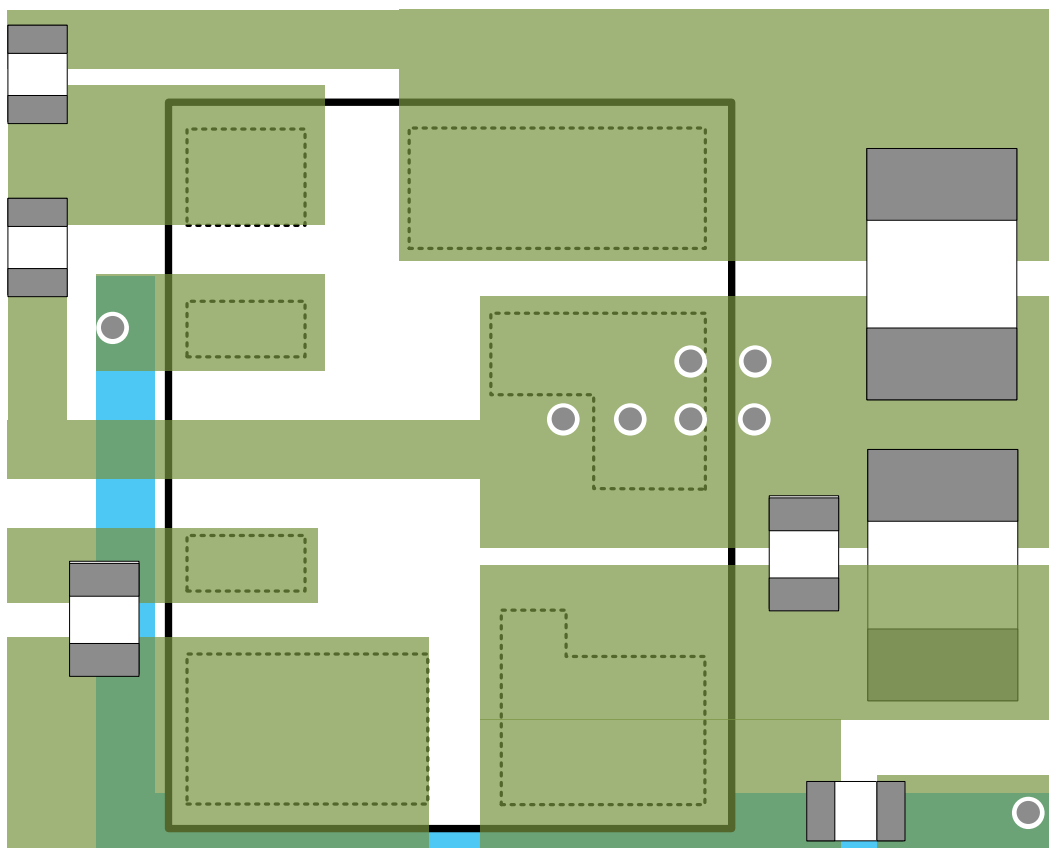


7Zf dV#EYVc R G fe#2

.)

EYV d\Xf Re cT f Udf WwW ZdeRSZj R_U_ dV ac SV dh ZY feTRcW j Rj fe WA43 CRUReZ_ WZXY
WbfV_Tj_ dVZUfTVd6 : d ac aVcRj fe VeVYZY WbfV_Tj dh ZYXaReY dVddV_eR ZZ ZVeV V_XeY
R_URcR WR eRTVd T__VTdUe eVVDH aZ_R_U RhRjd fdVR Xc f_UaR_Vf_UVceVdh ZYX d\Xf Re ce
ZZ ZVT faZX EYVZafeTRaRTc c_WUde SVgVg T dVe eVVG: aZ_R_U8 5 aZ_e dUfTVeVZafedf aa j
cZaV ARTVeV TRaRTc cRd T dVe G: aZ_Rd a ddS Ve dUfTVYZY WbfV_Tj cZX_Xg dRXV _DH aZ_Rd
hV 7Zf d\#% d eVcVT V_UVU A43 Rj fe VD4E##

EYV Rj fe_WUd SVU _Vh ZhV T_dZVReZ_ WeVeVc R 2 RcXVe a Rj VcXc f_UaR_VfdZX f eZ V
eVc R gZd d fdUe Z ac gVeVeVc R UZdZReZ_ EYVS e Rj VcZ R RcXV Xc f_UaR_VT __VTdUe eV
e a Rj VcXc f_U Sj gZd



7Zf d\#& A43 =Rj fe6i R aV

EYV R Z f :4 f_TeZ_e/ aVRe/dY f USV dVceTeUe #& 4 f_UVc_c R aVReXT_UZ_d 4RTf Re/
eV R Z f R hRSVUZdReZ_A5 R R_U WaeyVRteR a hVcUZdReZ_VddeR_cVbfR e A5 R EYV
R Z f a hVcUZdReZ_Z Z UVe/c ZVUfdZX6bfReZ_*

h YWd/

E2 d eV R Z f R SZ_ee/ aVRe/d/WceVRaa ZReZ_
C 2 d eV f_TeZ_e R SZ_eeVc R dVdReTV

EYV dR f_TeZ_e R SZ_eeVc R dVdReTV C 2 WeyV aRT RXV XdRej UVaV_Ud_eV A43 ej aV Rj fe
eVc R aRUT__VTeZ_R_UV_gZ_V_eR WTe cFdZXeYz A43 T aaVcR_Ud UVcZXeV8 5 e R RcXVXc f_U
aRe/V_YR_TV eV eVc R aVdWc R_TV FdZX dVgRd T__VTe eV Xc f_U aRe/_eV e a Rj VcR_US æ
Rj VcRc f_UeV:4 h ZY fed UVc Rd Rd V_YR_TV eV eVc R TRaRSZq

01

(= 64=82 E AG:6H

(= 64=82 3 EE G:6H

(= 64=82 D:5 6 G:6H

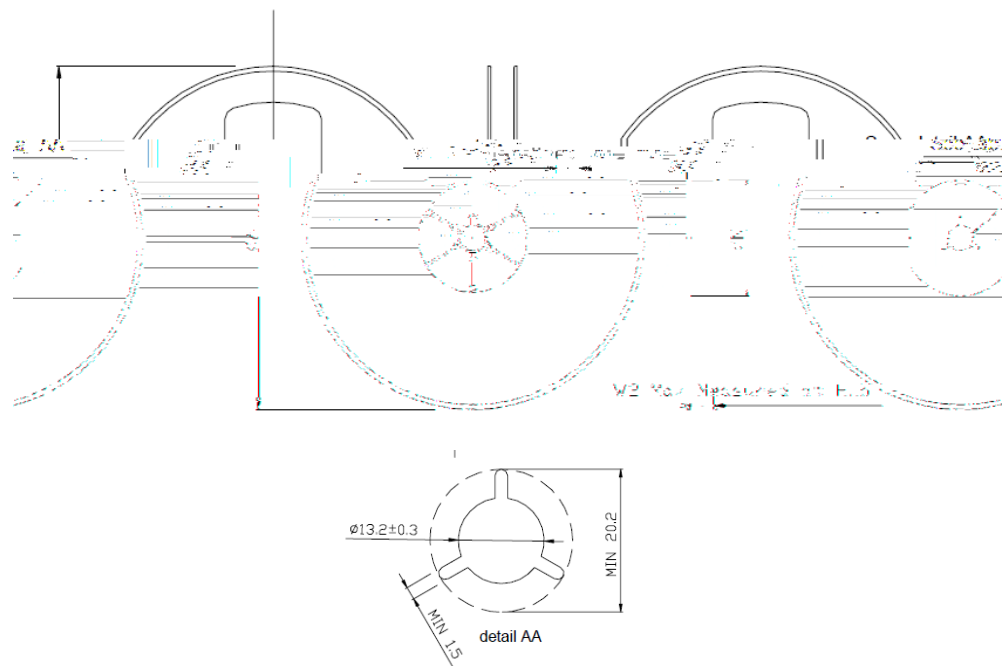
(= 64=8 2 C64 6 5 6 5 =2 5 A2EE6C

01

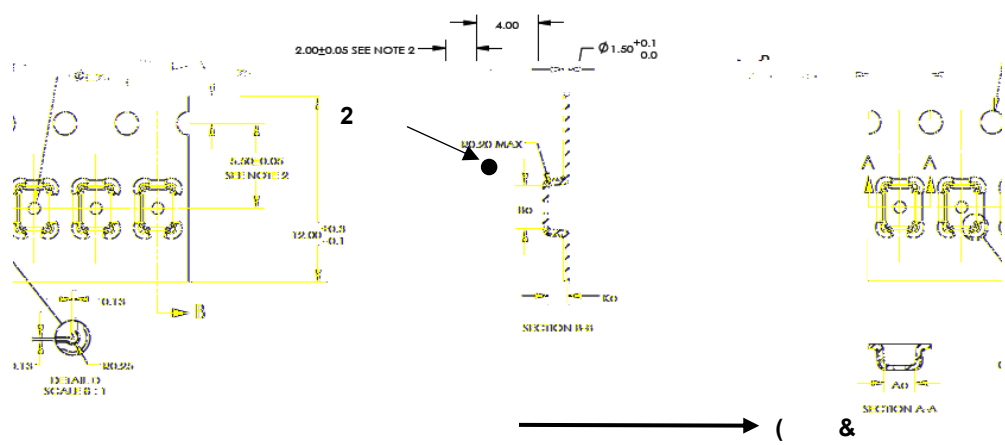
5dRh_ZXac a dWUe SV RUVR 6564 aRT RXV feZ_V ## gRcReZ_
5dRh_ZX_ee dTRV
2_ZVRcUZ V_dZ_dRdV_Z ZZ VdVd
% EYVc R aRUdYR SVd UVdU _eYVS RdJ
& 5Z V_dZ_d VM a dVUaRU _S ee VdRT RXVU _eZTfUV UVdY
4_eRTeA43 S RdVRSdZReZ_Wc ZZ f d UVc Rd h VSe VdR_TvdSVh W_eYVaZd

(7 c# 3f ZX & JRU 5 ZZ C RJ 9 RZR 5 ZeZe 3 VZX * &
) % (* 72l +) % (* hhh dZ e/ eT DZ 4 e/ e#

TAPE AND REEL INFORMATION



1.	.. 4		
	0	01	
	(	)	
0	&)		#
	#%		
			%%
EJ A6 H :5E9		#	



1.	.. 4		
	0	01	
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1	# (	#)	# *
- 1		&	%&