,VRODWLRQ 9ROWDJH	9LVR	8	9UPV
2SHUDWLQJ 7HPSHUDWXUH	7RSU	a	
-XQFWLRQ 7HPSHUDWXUH	7M		
6WRUDJH 7HPSHUDWXUH	7VWJ	a	
6ROGHULQJ 7HPSHUDWXUH	7VRO		
3HDN SXOVH YROWDJH 7M QRQ UHSHWLWLYH RII VWDWH	9SS		

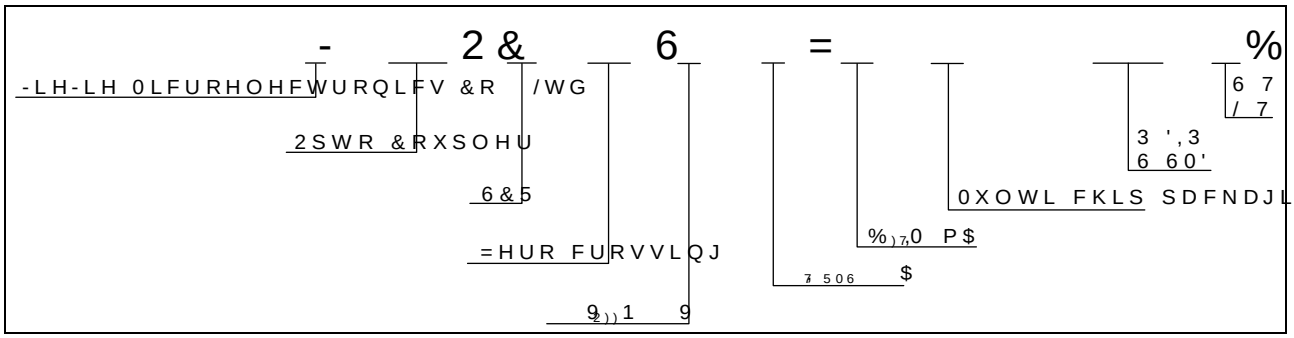
EKd íìì…• ‰íµìò,•ì(ŒE ‹µ v Ç
EKd î (}Œ íu]vµš U ZX,XAðì•òì9

> dZ/ > , Z d Z7ĤdPSĤUDWXUH ƒ&

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
,QSXW	)RUZDUG 9ROWDJH	)	) ΦP$	,			9
	5HYHUVH &XUUHQW	5	5 9	9			$

ll pU r€H!Z€0÷EU• 7 H €E"È q Ç G@…7U 5

KZ Z/E' /E&KZD d/KE



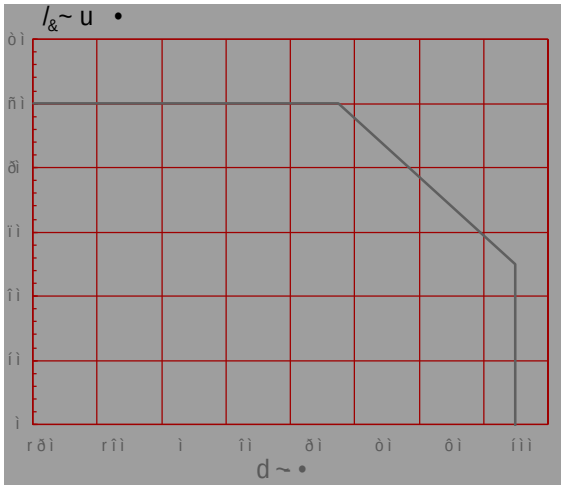
W l]vP Yµ vš]šÇ				
K‰š]}v	Yµ vš]šÇ	Yµ vš]šÇ t /vv Œ }Æ		Yµ vš]
/W	òì hv]š•ldµ	ðì d}µÆ	•l/ñv/vŒv Œ }Æ lKµš vŒš•}Æ	A
^D	íîìì hv]š•lZ o	îZ}Æ•l/vñ ŒvvŒ }Æ lKµš vŒš•}Æ		A

D Z</E'

Z Œ š Œ]•š] • µŒÀ •

FIG.1: 0D[$OORZDEOH /(')RUZDUG &XUUHQW YV $PELHQW 7HPSHUDWXUH

FIG.2: 2QQWWYDWH 7HUPLQDO &XUUHQ 7HPSHUDWXUH



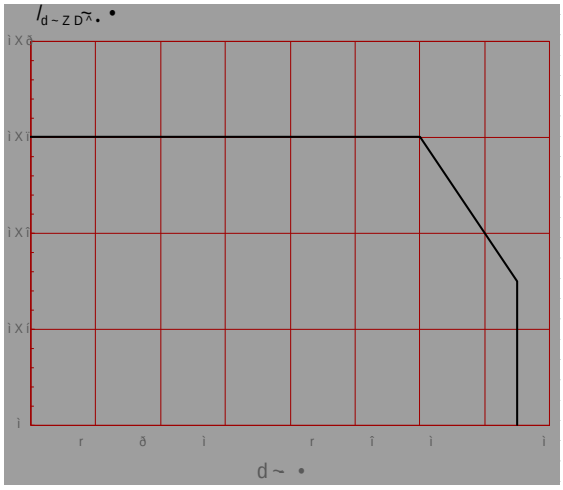
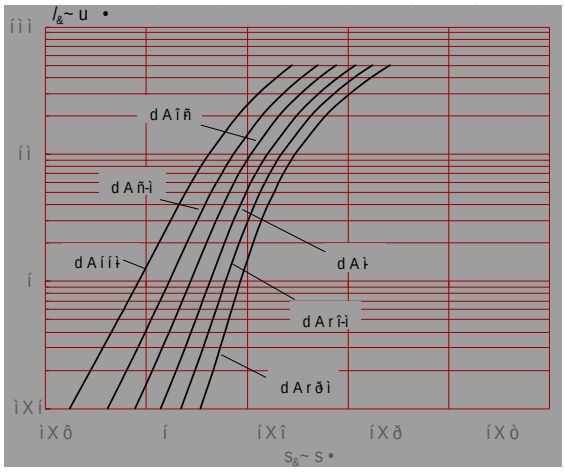


FIG.3:)RUZDUG &XUUHQW YV)RUZDUG 9ROWDJH

FIG.4: 9RWWDJH YV $PELHQW 7HPSHUDWXUH



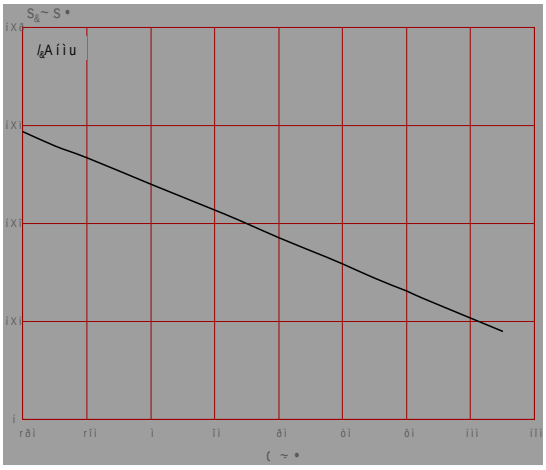
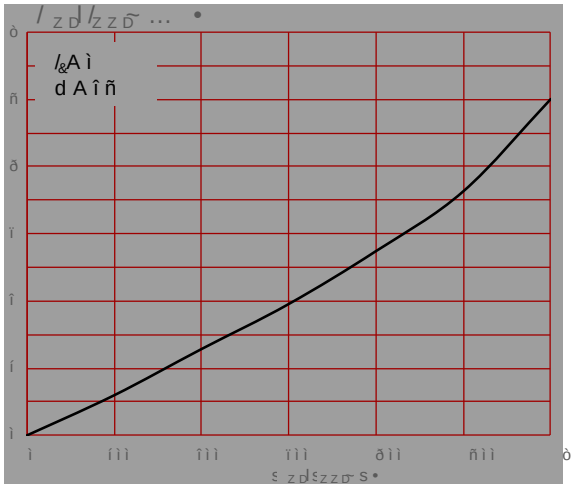


FIG.5: 2II VWDWH 7HUPLQDO &XUUHQW YV 7HUPLQDO 9ROWDJH

FIG.6: 1RUPDOL]HG 7ULJJHU &XUUHQ $PELHQW 7HPSHUDWXUH



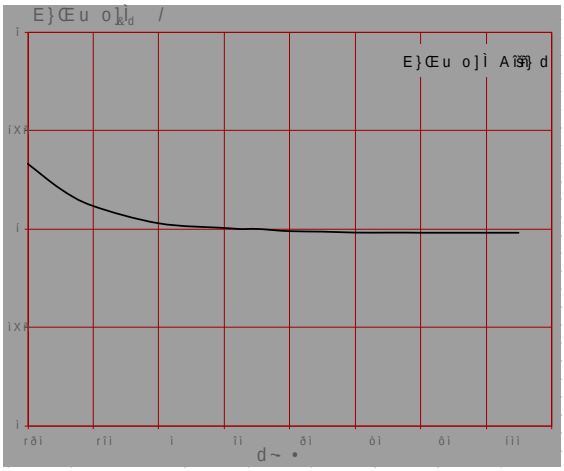


FIG.7: 2Q VWDWH FKDUDFWHULVWLFV

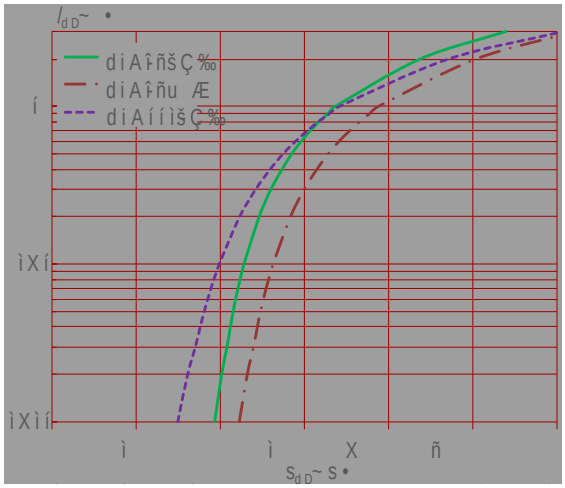


FIG.8: 1RUPDOL]HG +ROGLQJ &XUUH
$PELHQW 7HPSHUDWXUH

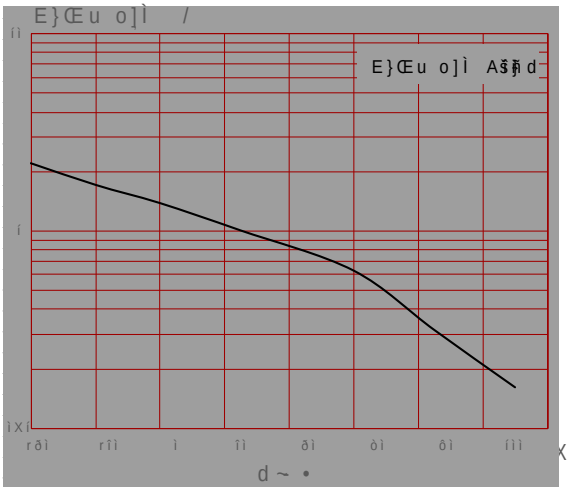


FIG.9: 7XUQ 2Q 7LPH YV)RUZDUG &XUUHQW

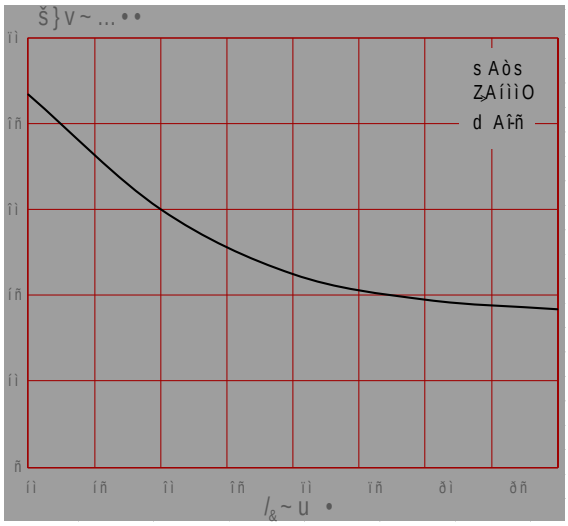
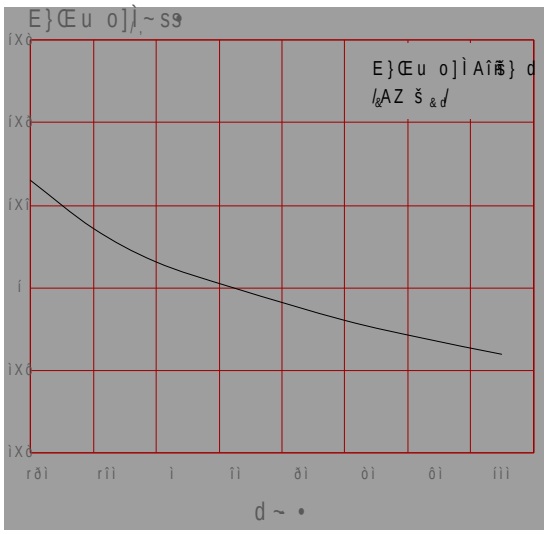


FIG.10: 1RUPDOL]HG ,QKLELW 9ROW
$PELHQW 7HPSHUDWXUH



d ^d /Z h/d^

FIG.11: 7HVW &LUFXLWV RI 7XUQ 2Q 7LPH **FIG.12:** :DYHIRUPV RI 7XUQ 2Q 7LPH

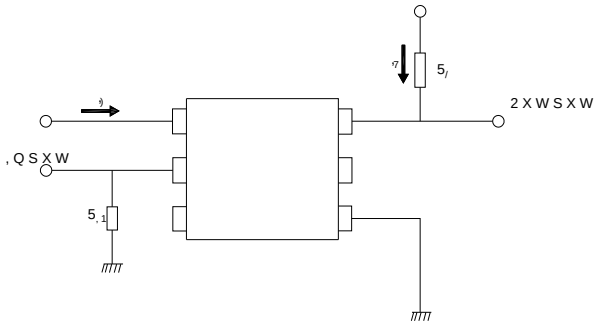
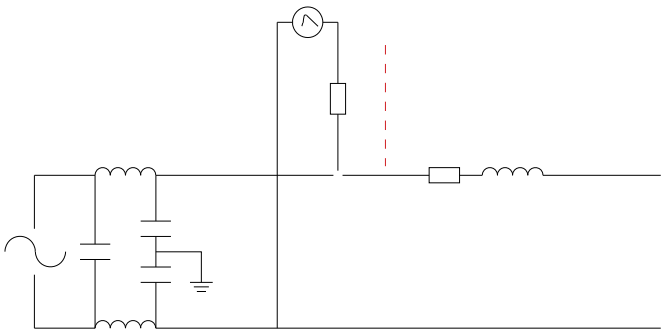
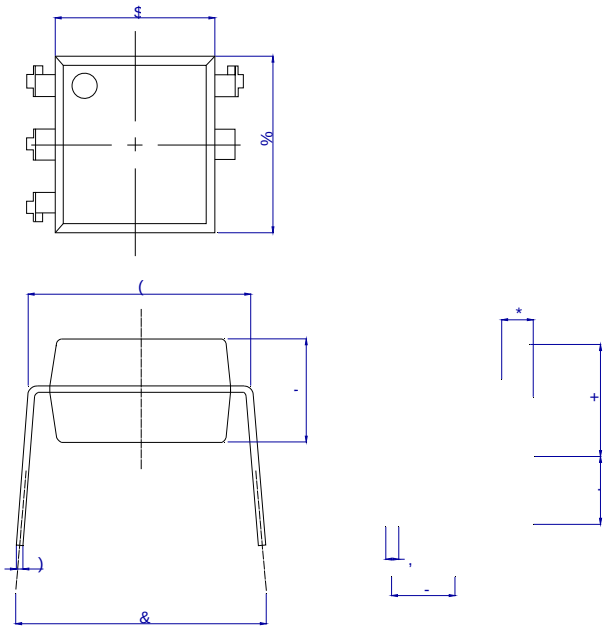


FIG.13: 7HVW FLUFXLW IRU (OHFWULFDO &KDUDFWHULVWLFV WR ,(&



W l P]u v•]}v ~h v]šW uu•

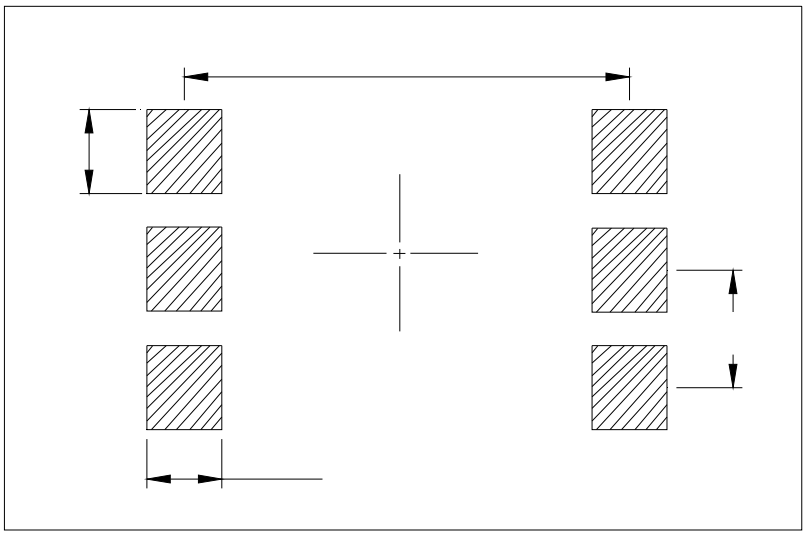
Standard DIP Type:



5HI	'LPHQVLRQV					
	0LOOLPHWHUV			,QFKHV		
	0LQ	7\S	0D[	0LQ	7\S	0D[
$						
%						
&						
'						
(						
)						
*						
+						
,						
-						
.						

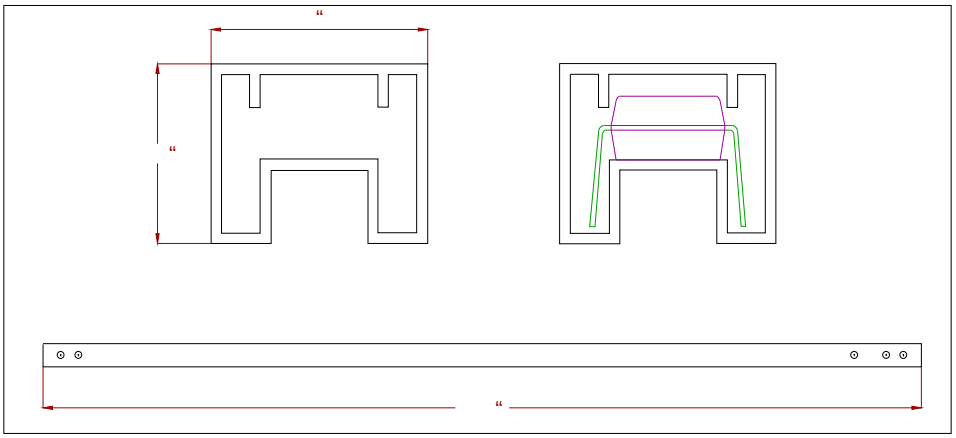
Z KDD E ^K> Z D ^< ~]u v•]}v•]v uu µvo •• }šZ Œ

Option SMD



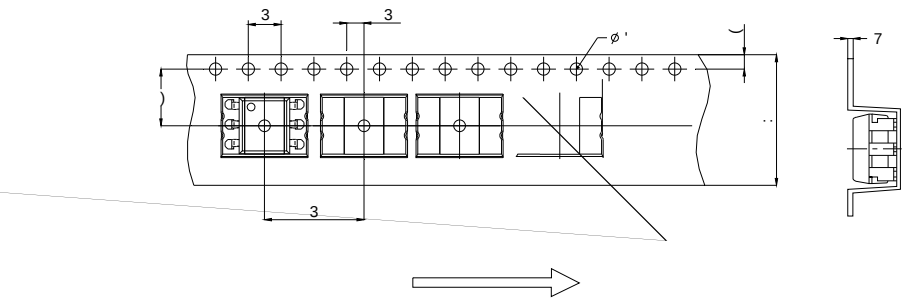
d h ^W /&/ d/KE^ ~]u v•]}v•]v uu µvo •• }šZ ŒÁ]•

Standard DIP



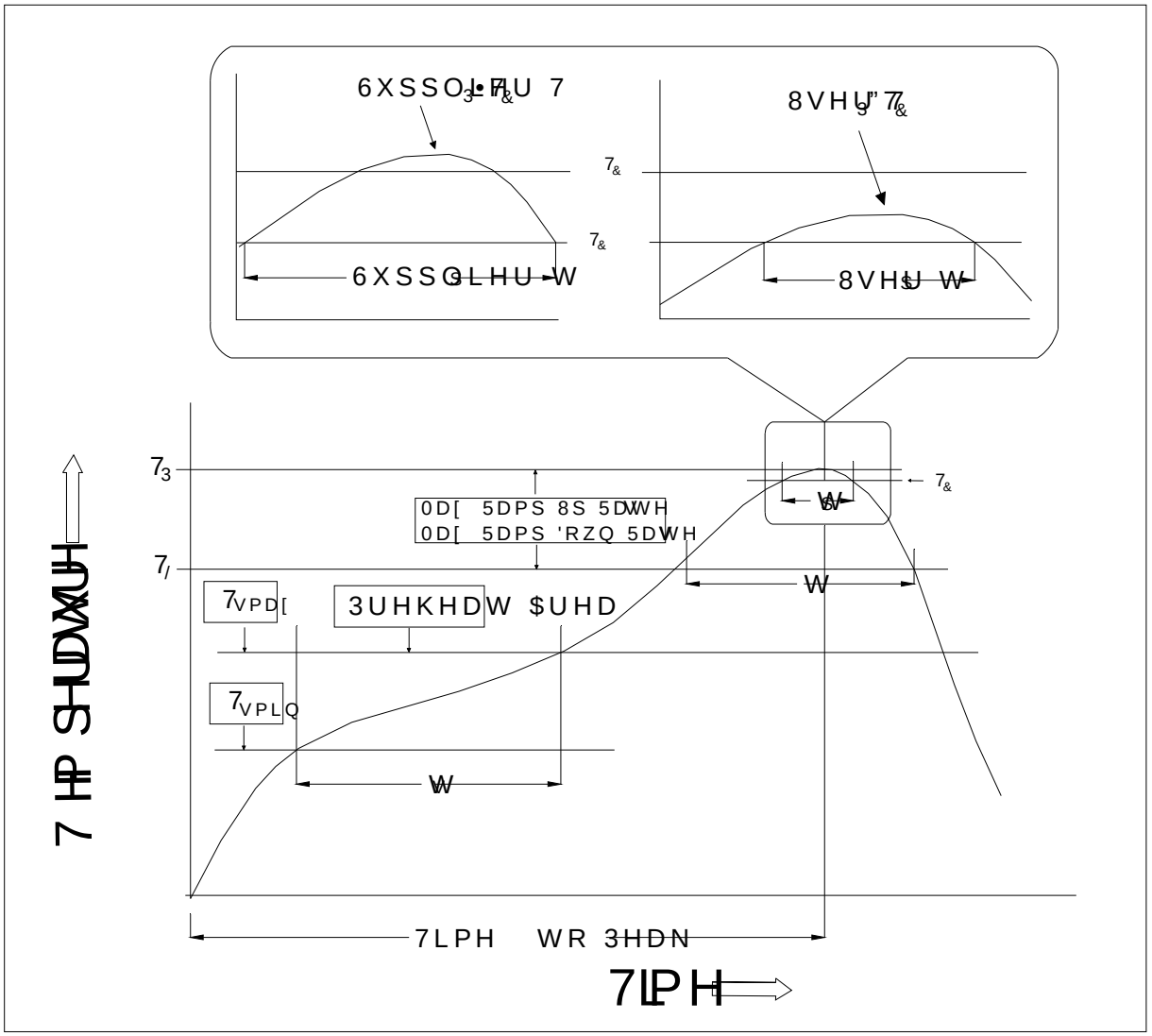
Z Z / Z d W ^ W /& / d v •] } E v ^ •] v] u u µ v o • • • š š ž Œ Á] •

Option S



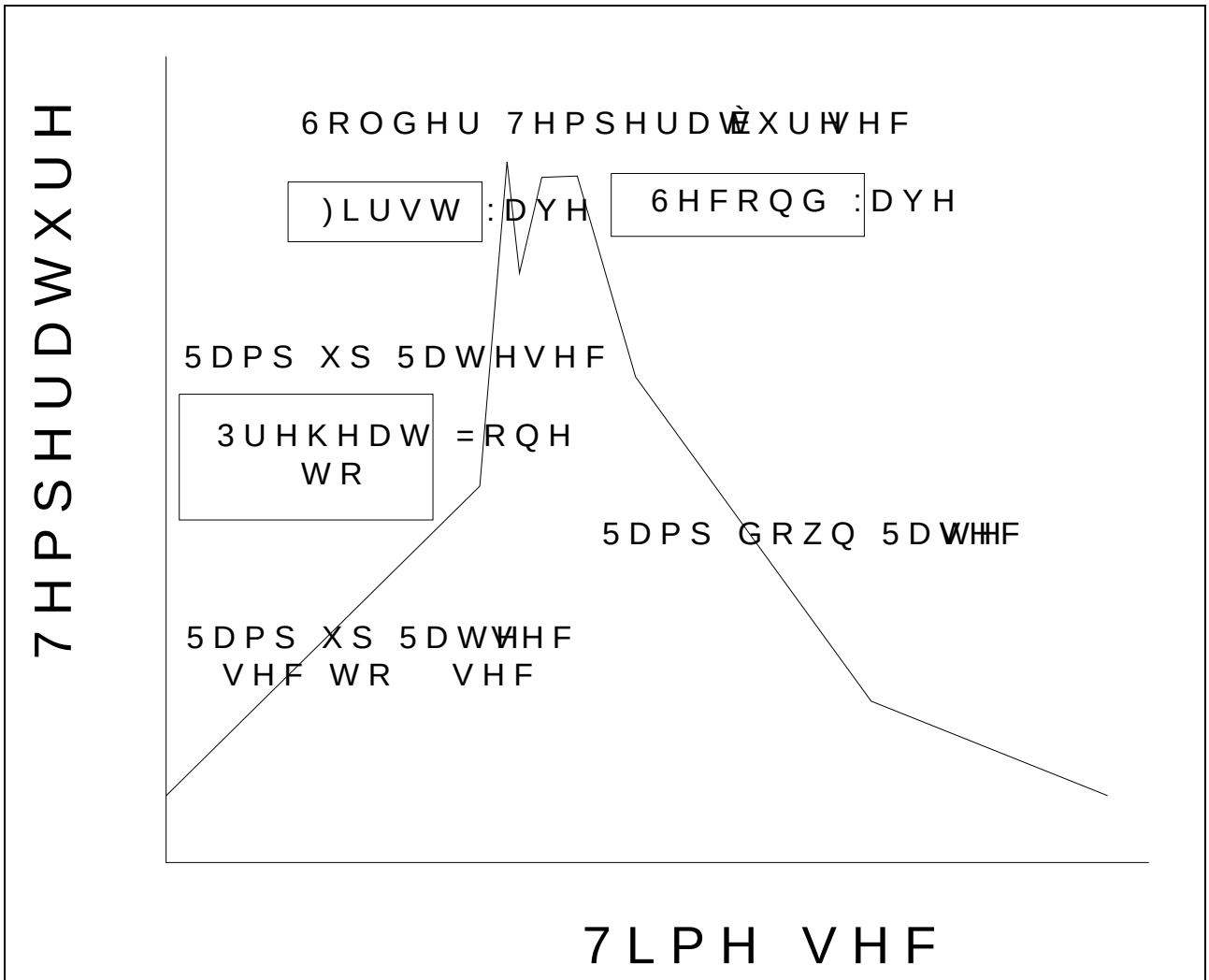
5HI	'LPHQVLRQV					
	0LOOLPHWHUV			,QFKHV		
	0LQ	7\S	0D[	0LQ	7\S	0D[
'						
3						
3						
3						
(						
)						
7						
:						

Z &>Kt /E&KZD d/KE



Profile Feature	Sn-Pb Assembly Profile	Pb-Free Assembly Profile
7HPSHUDWXUH 0LQ	7VPLQ	
7HPSHUDWXUH 0D[	7VPD[	
7LPH WV IURP 7VPLQ WR 7VPD[	VHFRQGV	VHFRQGV
5DPS XS 5DWH W/ WR WS	3HFRQG PD[	VHFRQG PD[
/LTXLGXV 7HPSHUDWXUH 7/		
7LPH W/ 0DLQWDLQHG $ERYH 7/	VHFRQGV	VHFRQGV
3HDN %RG\ 3DFNDJH 7HPSHUDWXUH		
7LPH W3 ZLWKLQ	VHFRQGV	VHFRQGV
5DPS GRZQ 5DWH	73 WR 7/ VHFRQG	VHFRQG
7LPH WR 3HDN 7HPSHUDWXUH		PLQXWHV PD[

t s ^K> Z/E'



, E ^K> Z/E' z ^K> Z/E' /ZKE	
6ROGHULQJ 7HPSHUDWXUH	f
6ROGHULQJ 7LPH	V PD[

1RWH

5HIORZ VROGHULQJ LV UHFRPPHQGHG DVWKRVZKQH QVRHPSRHUHDWWKDQHWKH

$YRLG GLUHFW FRQWDFWSRE[HQGZHQ\QWRXUOLDFHV H[FHHGLQJ LWV PD
VWRUDJH WHPSHUDWXUH

$SSOLFDWLRQ RKHSUHSRV\XERGRKQLWLSOHGDWHGWHPSHUDWXUHV ,Q V
VFHQDULRV DQ\HDPSXOVLHQGRWRHFFHHG 1

(QVXUH WKH FRPSRQHQW KDV FRROHGWRRDPEHWKQQQZLXSVHUDXHQ
PDQXIDFWXULQJ VWHSV

7KH FRPSRQHQW HKDV BQVHKHOLZKHQVWRRGHGXQGHUWLRQV

5HFRPPHQG VWRUDJH 7HPS a f&

5HFRPPHQG VWRUDJH KXPLGLW\

06/ OHYHO 06/

,QIRUPDWLRQ IXUQXVKHGV LQ WKLVHGRFG WR EH DFFXUDWH D
-LDQJVX -LH-LH 0LFURRHOHFWDVRQLFVCOLPLWHUVSRQVLEOHRQVH
RI XVH ZLWKRXW FRQVLGHUDWLRQ IRG LVWFK,QLRUPDWLRQ
LQ WKLV GRFXPHQWKDLQJVHXZLWHKFRXWRQRWLFH DSDUW IURP V
VLJQHG -LDQJVX-LHVLZHLPRKPWKH DJUHHPHQW
3URGXFWV DQG LQIRUPDWLRQ SURYLGHGQJLHQPHQWVRGSFDXP
-LDQJVX -LH-LH DVVXPEHLVOQRWURVSRQVLQIULQJHPHQW RI RW
ZKLFK PD\ UHVXOW IURP WKH XVH RI V7XKLKV SURFXUHQW DQGS
DQG UHSODFHV DOO LQIRUPDWLRQ SUHYLRXVO\ VXSSOLHG
LV D UHJLVWHUHGDQJUXG-LHD-UN RLF-UR H/WHG WURQLFV &R
&RS\ULJKW -LDQJVX -LH-LH 0LFUR&RHO/WFG WURQLHGL JKWV UHVH