9 'XDO 3 &K 3RZHU 0267

Feature

- High Speed Power Switching, Logic Level
- Enhanced Avalanche Ruggedness
- 100% UIS Tested, 100% Rg Tested
- Lead Free, Halogen Free

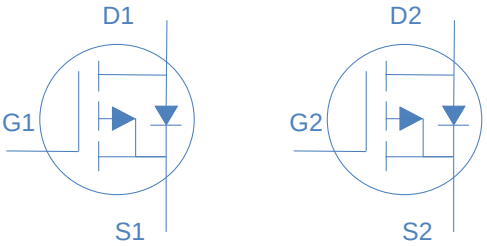
V_{DS}		-30	V
$R_{DS(on),typ}$	V_{GS}=-10V	20.5	m :
$R_{DS(on),typ}$	V_{GS}=-4.5V	29	m :
I '	6LOLFRQ /LPLW	-8	A

SOIC-8

Application

- Hard Switching and High Speed Circuit
- DC/DC in Telecoms and Inductrial

3DUW 1XPEHU	3DFNDJH	0DUNLQJ
HTS240B03	SOIC-8	TS240B03



Absolute Maximum Ratings at T_j XQOHVV RWKHUZLVH VSHFLILHG

3DUDPHWHU	Symbol	&RQGLWLR	Value	Unit
&RQWLQXRXV 'UDLQ &XUUHQW	I_D	T_C 6LOLFRQ /LPLWHG	-8	A
		T_C	-6	
'UDLQ WR 6RXUFH 9ROWDJH	V_{DS}	-	-30	V
*DWH WR 6RXUFH 9ROWDJH	V_{GS}	-	–25	V
3XOVHG 'UDLQ &XUUHQW	I_{DM}	-	-32	A
$YDODQFKH (QHUJ\ 6LQJOH 3XOVH	E_{AS}	L = P + $_C$ 7	3.20	P -
3RZHU 'LVVLSDWLRQ	P_D	T_A	2.0	:
2SHUDWLQJ DQG 6WRUDJH 7HPSHUDWXUH	T_J, T_{stg}		-55 to150	

Absolute Maximum Ratings

3DUDPHWHU	Symbol	Max	Unit
7KHUPDO 5HVLVWDQFH -XQFWLRQ $PELHQW	$R_{\theta JA}$	62.5	:
7KHUPDO 5HVLVWDQFH -XQFWLRQ &DVH	R_{T-C}	25	:

(OHFWULFDO &KDUDFWHULVWLFV 7R WKHUZLVH VSHFLILHG 6WDWLF &KDUDFWHULVWLFV

3DUDPHWHU	Symbol	&RQGLWLRQ	Value			Unit
			min	typ	max	
'UDLQ WR 6RXUFH %UHDNGRZQ 9ROWDJH	$V(BR)DSS	VGS=0V, ID=-250PA	-30	-	-	V
*DWH 7KUHVKROG 9ROWDJH	VGS(th)	VGS=VDS, ID=-250 PA	-1.0	-1.5	-3.0	
=HUR *DWH 9ROWDJH 'UDLQ &XUUHQW	IDSS	VGS=0V, VDS=-24V, Tj	-	-	-1	PA
		VGS=0V, VDS=-20V, Tj	-	-	-10	PA
*DWH WR 6RXUFH /HDNDJH &XUUHQW	IGSS	VGS=–20V, VDS=0V	-	-	–100	nA
		VGS=–25V, VDS=0V	-	-	–500	nA
'UDLQ WR 6RXUFH RQ5HVLVWDQFH	RDS(on)	VGS=-10V, ID=-8A	-	20.5	24	m:
		VGS=-4.5V, ID=-6A	-	29	37	
7UDQVFRQGXFWDQFH	gfs	VDS=-5V, ID=-8A	-	24	-	S
*DWH 5HVLVWDQFH	RG	VGS=15mV, VDS 9 I 0+]	-	4.5	-	:

'\QDPLF &KDUDFWHULVWLFV

,QSXW &DSDFLWDQFH	Ciss	VGS=0V, VDS 9 I 0+]	-	1407	-	S)
2XWSXW &DSDFLWDQFH	Coss		-	208	-	
5HYHUVH 7UDQVIHU &DSDFLWDQFH	Crss		-	164	-	
7RWDO *DWH &KDUJH	Qg (10V)	VDD=-15V, ID=-8A, VGS=-10V	-	20.3	-	nC
	Qg (4.5V)		-	9.8	-	
*DWH WR 6RXUFH &KDUJH	Qgs		-	3.2	-	
*DWH WR 'UDLQ 0LOOHU &KDUJH	Qgd		-	4.9	-	
7XUQ RQ 'HOD\ 7LPH	tD(on)	VDD=-15V, ID=-1A, VGS=-10V, RG=2.7:,	-	10	-	ns
Rise time	tr		-	8	-	
7XUQ RII 'HOD\ 7LPH	tD(off)		-	25	-	
)DOO 7LPH	tf		-	6	-	

5HYHUVH 'LRGH &KDUDFWHULVWLFV

'LRGH)RUZDUG 9ROWDJH	VSD	VGS=0V, I)=-2.3A	-		-1.2	V
5HYHUVH 5HFRYHU\ 7LPH	trr	I) $)GG, W Rs$	-	32	-	ns
5HYHUVH 5HFRYHU\ &KDUJH	Qrr		-	26	-	nC

)LJ 7\SLFDO 2XWSXW &KDUDFWHULVWLFV

)LJXUH 2Q 5HVLVWDQFH YV *DWH 6RXUFH 9ROWD

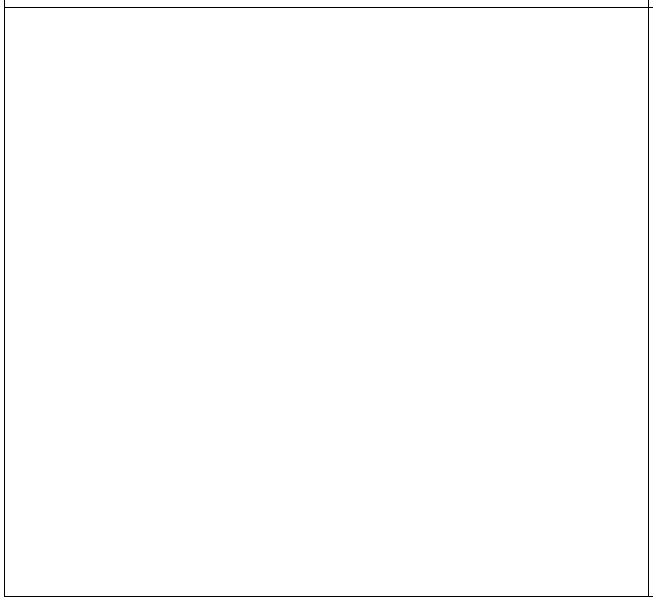
)LJXUH 2Q 5HVLVWDQFH YV 'UDLQ &XUUHQW

)LJXUH 2Q 5HVLVWDQFH YV -XQFWLR

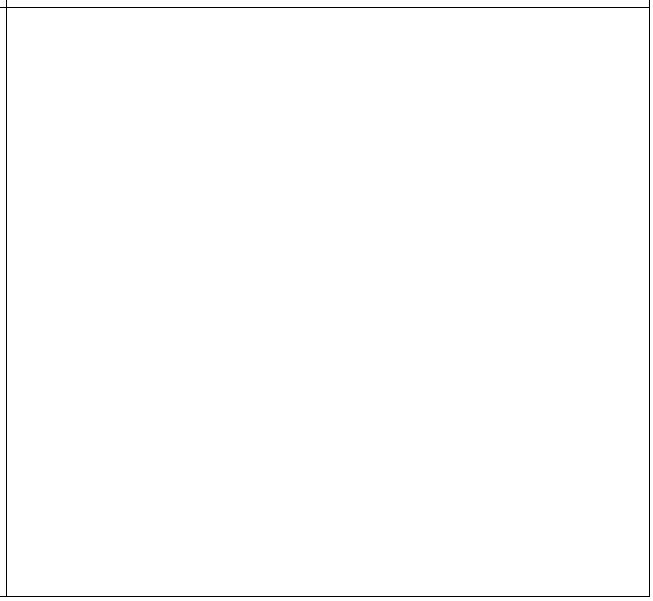
)LJXUH 7\SLFDO 7UDQVIHU &KDUDFWHULVWLFV

)LJXUH 7\SLFDO 6RXUFH 'UDLQ 'LRGH)RUZDUG 9R

)LJXUH 7\SLFDO *DWH &KDUJH YV *DWH



)LJXUH 7\SLFDO 2XWSXW &KDUDFWHULVWLFV YV 'UDLQ WR 6RX

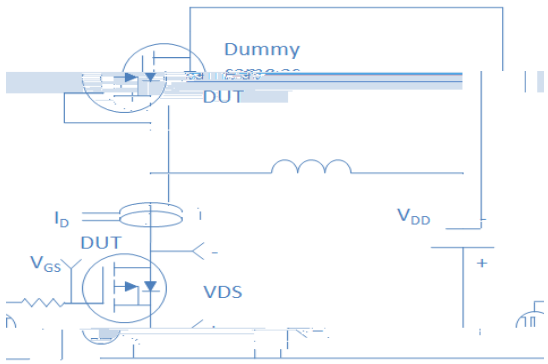


)LJXUH 0D[LPXP 6DIH 2SHUDWLQJ $UHD

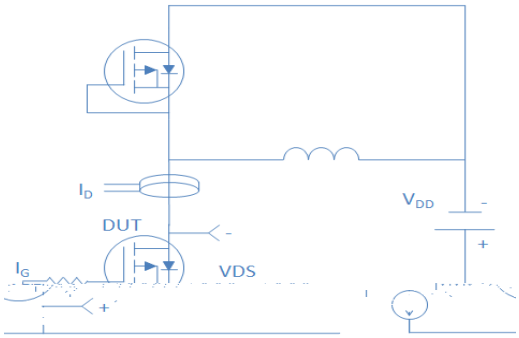
)LJXUH 6LQJOH 3XOVH 0D[LPXP 3RZHU 'LVVLSDWL

)LJXUH 1RUPDOL]HG 0D[LPXP 7UDQVLHQW 7KHUPDO ,PSHGDQFH -XQFWLRQ

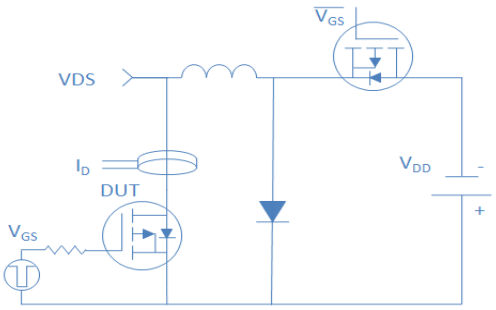
,QGXFWLYH VZLWFKLQJ 7HVW



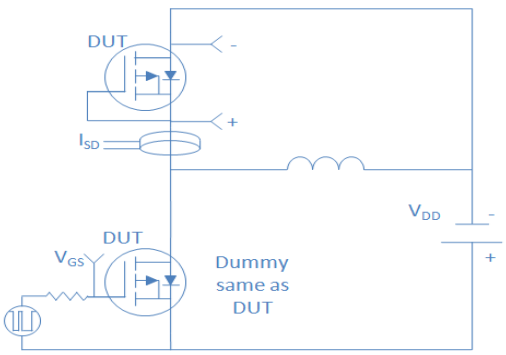
*DWH &KDUJH 7HVW



8FODPSHG ,QGXFWLYH 6ZLWFKLQJ 8,6 7HVW



'LRGH 5HFRYHU\ 7HVW



3DFNDJH 2XWOLQH

62,& OHDGV