HTM150A02

9 'XDO 1 &K 3RZHU

V_{DS}		20	V
R ' 6 RQ W	V_{GS}=4.5V	13	m :
I_D		7	A

Feature

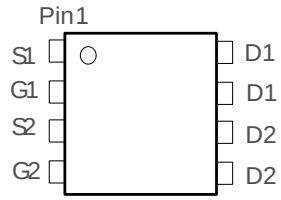
- High Speed Power Switching, Logic Level
- Enhanced Avalanche Ruggedness
- 100% UIS Tested 100% Rg Tested
- Lead Free, Halogen Free

Application

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

DFN3x3

3DUW 1XPEHU	3DFNDJH	0DUNLQJ
HTM150A02	') 1	TM150A02



Absolute Maximum Ratings at T_j XQOHVV RWKHUZLVH VSHFLILHG

3DUDPHWHU	Symbol	&RQGLWLRQ	Value	Unit
&RQWLQXRXV 'UDLQ &XUUHQW	I_D	T_C	7	A
		T_C	5	
'UDLQ WR 6RXUFH 9ROWDJH	V_{DS}	-	20	V
*DWH WR 6RXUFH 9ROWDJH	V_{GS}	-	±12	V
3XOVHG 'UDLQ &XUUHQW	I_{DM}	-	28	A
$YDODQFKH (QHUJ\ 6LQJOH 3XOVH	E_{AS}	P + $_C$ 7	5.0	P -
3RZHU 'LVVLSDWLRQ	P_D	T_C	2	:
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	$R_{\theta JC}$	25	:

(OHFWULFDO &KDUDFWHULVWLFV (Ta=25°C unless otherwise specified)

6WDWLF &KDUDFWHULVWLFV

3DUDPHWHU	Symbol	&RQGLWLRQ	Value min	W\S	max	Unit
'UDLQ WR 6RXUFH %UHDNGRZQ 9ROWDJH	$V_{(BR)DSS}$	V_{GS}=0V, I_D=250μA	20	-	-	V
*DWH 7KUHVKROG 9ROWDJH	$V_{GS(th)}$	V_{GS}=V_{DS}, I_D=250μA	0.4	0.8	1.2	
=HUR *DWH 9ROWDJH 'UDLQ &XUUHQW	I_{DSS}	V_{GS}=0V, V_{DS}=20V, T_j=25°C	-	-	1	μA
		V_{GS}=0V, V_{DS}=16V, T_j=125°C	-	-	25	
*DWH WR 6RXUFH /HDNDJH &XUUHQW	I_{GSS}	V_{GS}=±20V, V_{DS}=0V	-	-	±100	nA
'UDLQ WR 6RXUFH RQ 5HVLVWDQFH	$R_{DS(ON)}$	V_{GS}=10V, I_D=7A	-	13	15	mΩ
		V_{GS}=4.5V, I_D=5A	-	19	23	
7UDQVFRQGXFWDQFH	g_{FS}	V_{DS}=10V, I_D=7A	-	9	-	S

'\QDPLF &KDUDFWHULVWLFV

,QSXW &DSDFLWDQFH	C_{iss}		-	700	-	
2XWSXW &DSDFLWDQFH	C_{oss}	V_{GS}=0V, V_{DS}=15V, f=1MHz	-	208	-	pF
5HYHUVH 7UDQVIHU &DSDFLWDQFH	C_{rss}		-	187	-	
7RWDO *DWH &KDUJH	Q_g		-	10	-	
*DWH WR 6RXUFH &KDUJH	Q_{gs}	V_{DD}=15V, I_D=7A, V_{GS}=4.5V	-	1.8	-	nC
*DWH WR 'UDLQ 0LOOHU &KDUJH	Q_{gd}		-	3.7	-	
7XUQ RQ 'HOD\ 7LPH	$t_{d(on)}$		-	15	-	
Rise time	t_r	V_{DD}=15V, I_D=7A, V_{GS}=10V	-	20	-	ns
7XUQ RII 'HOD\ 7LPH	$t_{d(off)}$	R_G=6Ω	-	30	-	
)DOO 7LPH	t_f		-	20	-	

5HYHUVH 'LRGH &KDUDFWHULVWLFV

'LRGH)RUZDUG 9ROWDJH	V_{SD}				1.2	V

)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 *DWH9ROWDJH

)LJXUH 7\SLFDO 2XWSXW &KDUDFWHULVWLFV

'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

'LRGH 5HFRYHU\ 7HVW

3DFNDJH 2XWOLQH

')1 [B3 OHDGV

Dimension in mm