

$R_{DS(ON)}$ (at $V_{GS}=2.5V$) 8mohm
 $R_{DS(ON)}$ (at $V_{GS}=1.8V$) 9mohm
 100% V_{DS} Tested 14mohm
 100% EAS Tested

YbYfU`8YgWf]dh]cb`

Trench Power MV MOSFET technology
 Excellent package for heat dissipation
 High density cell design for low $R_{DS(ON)}$
 Moisture Sensitivity Level 1
 Epoxy Meets UL 94 V-0 Flammability Rating
 Halogen Free

5dd`]WUh]cbg`

High current load applications
 Load switch
 Hard sw â á

				Unit
Drain-source Voltage		V_{DS}	20	V
Gate-source Voltage		V_{GS}	± 10	V
Drain Current	$T_C=25$	I_D	30	A
	T_C		10	

Single Pulse Avalanche Energy ^B		E_{AS}	64	
Thermal Resistance Junction-to-Case		R_{JC}	5	W
Junction and Storage Temperature Range		T_J, T_{STG}	-55 +150	

CfXYf]b [`:bZcf a Uh]cb` (Example)

DF9:9F98`D#B`	D57?-B ; `7C89`	Auf_]b[`	A=B-A A` D57?5 ; 9fidWgt	-BB9F`6CL` E 5BH-HMfidWgt	C H9F`75FHCB` E 5BH-HMfidWgt	89@=-J9FM`AC89
YJD30N02A	F1/F2	YJD30N02A	2500	/	25000	13" reel



M>8 '\$B\$&5

9`YWhf]WU`7\UfUWhYf]gh]Wg` (T_J=25 unless otherwise noted)

DUFU a YhYf`	Gma Vc`	7cbX]h]cbg`	A]b`	Hmd`	AUI`	Ib]hg`
GhUh]W`DUFU a YhYf`						
Drain-Source Breakdown Voltage	BV _{DSS}	V _{GS} =0V, I _D =250μA	20			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =20V, V _{GS} =0V			1	μA
		V _{DS} =20V, V _{GS} =0V, T _J =150			100	
Gate-Body Leakage Current	I _{GSS}	V _{GS} =± 10V, V _{DS} =0V			± 100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D =250μA	0.45	0.62	1.0	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =4.5V, I _D =15A		5.6	8	m
		V _{GS} =2.5V, I _D =7A		7.1	9	
		V _{GS} =1.8V, I _D =3A		10	14	
Diode Forward Voltage	V _{SD}	I _S =15A, V _{GS} =0V			1.2	V
Gate resistance	R _G	f=1MHz		1.7		
8mbU a]W`DUFU a YhYfg						
Input Capacitance	C _{iss}	V _{DS} =10V, V _{GS} =0V, f=1MHZ		1650		pF
Output Capacitance	C _{oss}			266		
Reverse Transfer Capacitance	C _{rss}			206		
Gk]hW\]b [`DUFU a YhYfg						
Total Gate Charge	Q _g	V _{GS} =10V, V _{DS} =10V, I _D =30A		46.8		nC
Gate-Source Charge	Q _{gs}			4.6		
Gate-Drain Charge	Q _{gd}			7.3		
Reverse Recovery Chrage	Q _{rr}	I _F =30A, di/dt=100A/us		5.8		
Reverse Recovery Time	t _{rr}			19.5		
Turn-on Delay Time	t _{D(on)}	V _{GS} =10V, V _{DS} =10V, I _D =30A R _{GEN} =3		13		ns
Turn-on Rise Time	t _r			110		
Turn-off Delay Time	t _{D(off)}			40		
Turn-off fall Time	t _f			105		

A. Pulse Test: Pulse Width 300us, Duty cycle 2%.
 B. T_J=25, V_{DD}=15V, V_G=5V, L=0.5mH, I_{AS}=16A



'Hmd]WU''DYfZcf a UbWY'7 \UfUWhYf]gh]Wg'

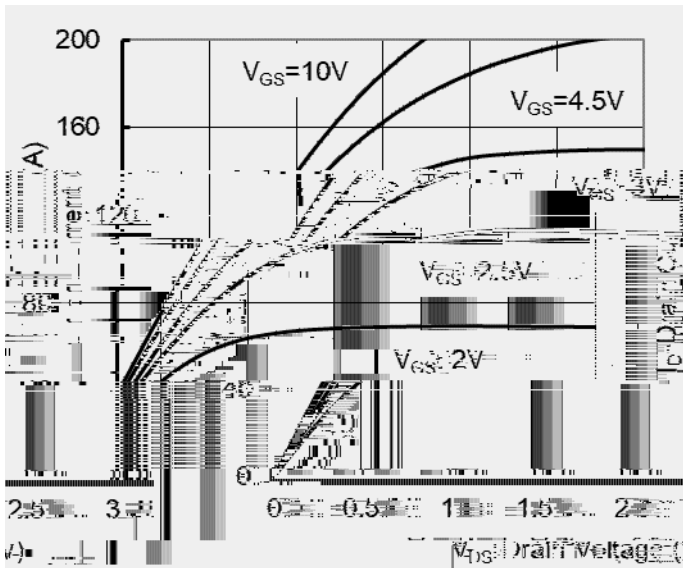


Figure1. Output Characteristics

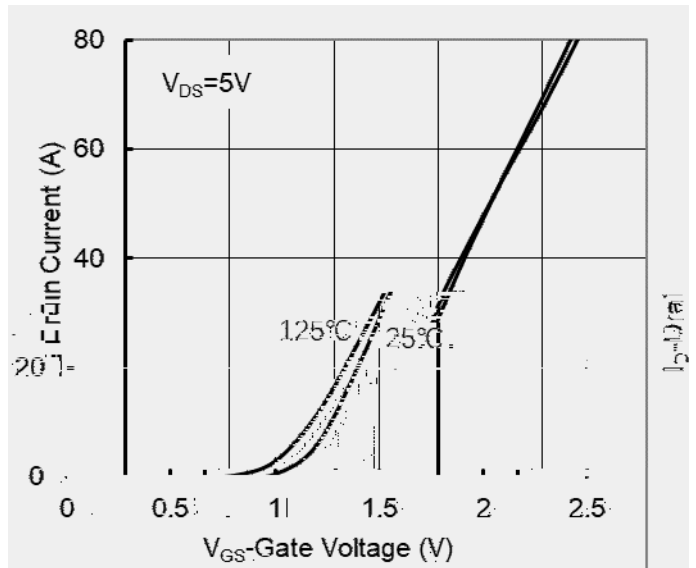


Figure2. Transfer Characteristics

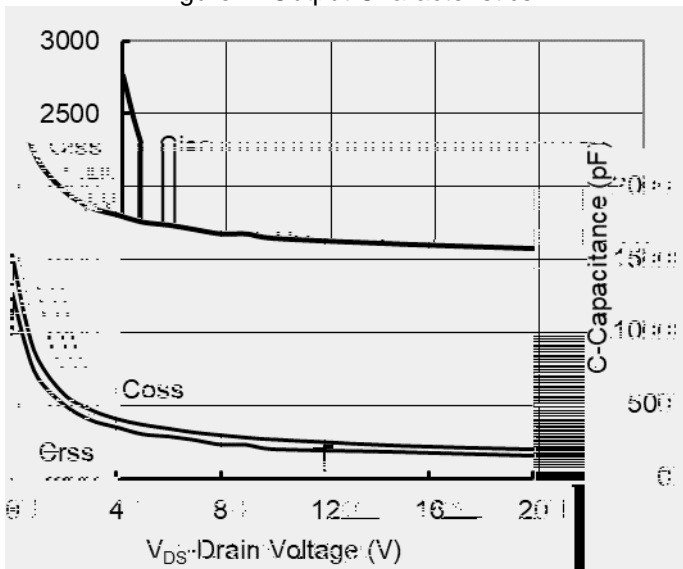


Figure3. Capacitance Characteristics

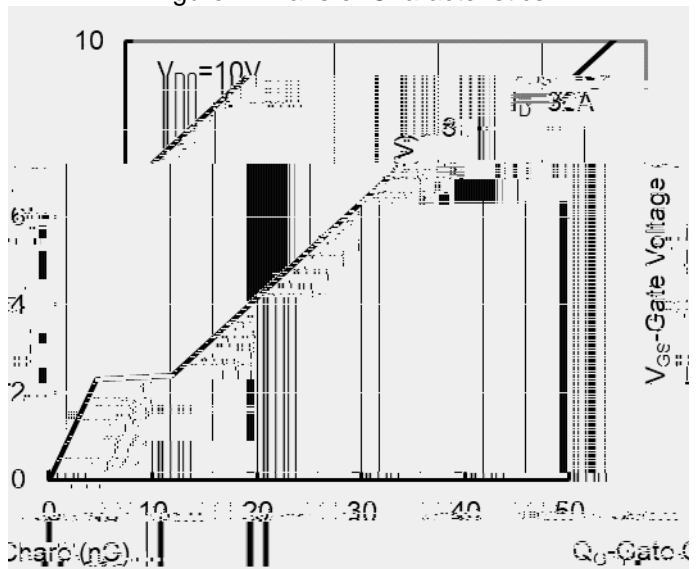


Figure4. Gate Charge

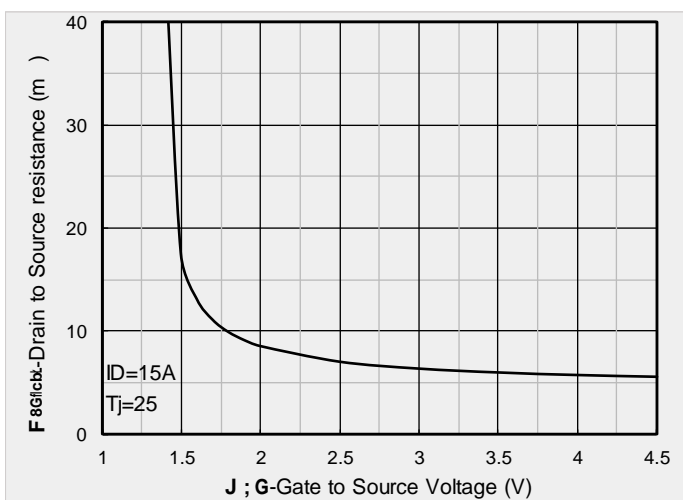


Figure5. On-Resistance vs. Gate to Source Voltage

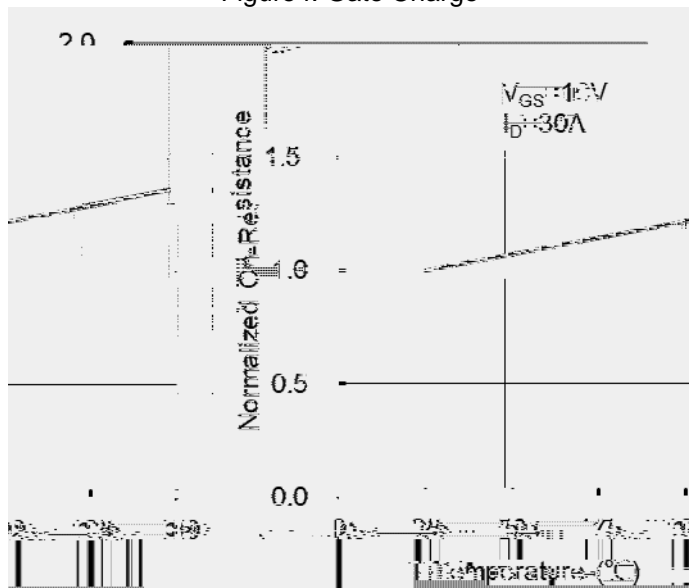


Figure6. On-Resistance vs. Junction Temperature

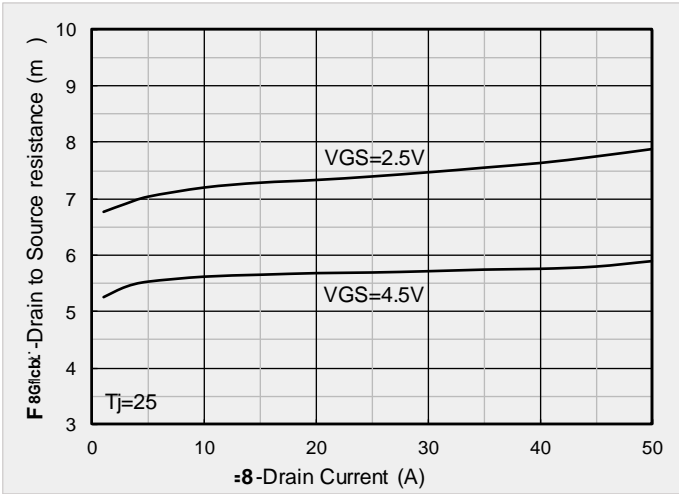


Figure 7. R_{DS(on)} VS Drain Current

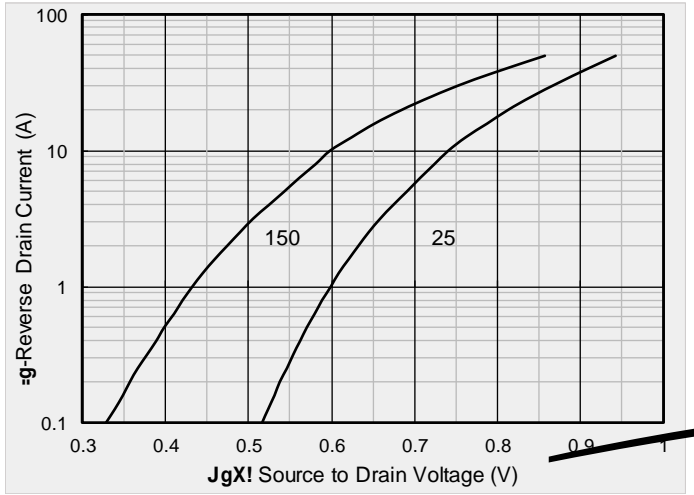


Figure 8. Forward characteristics of reverse diode

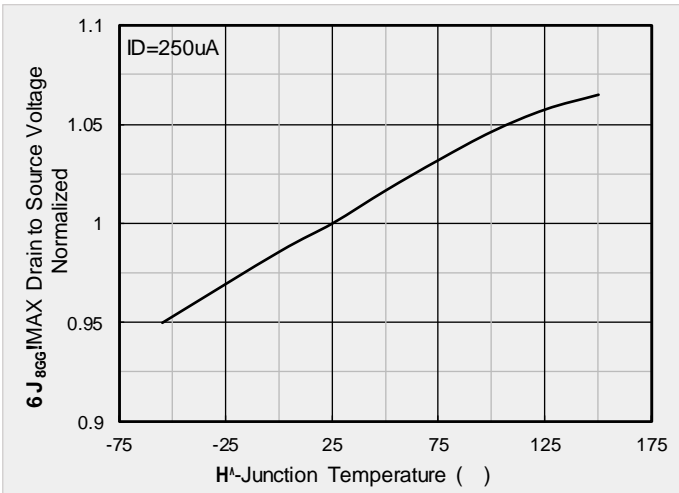


Figure 9. Normalized breakdown voltage

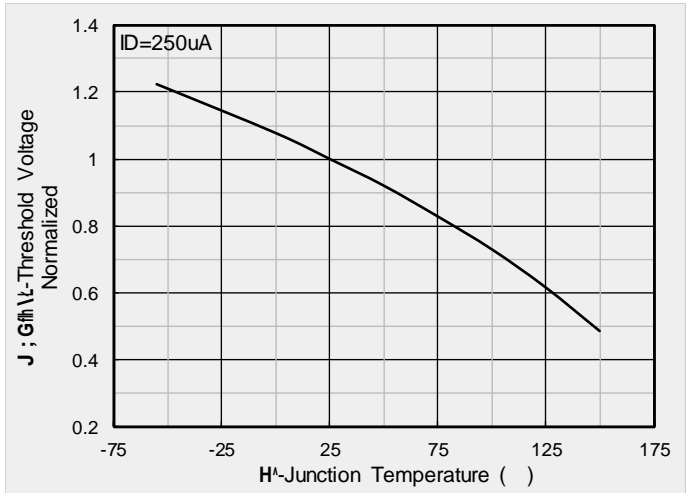
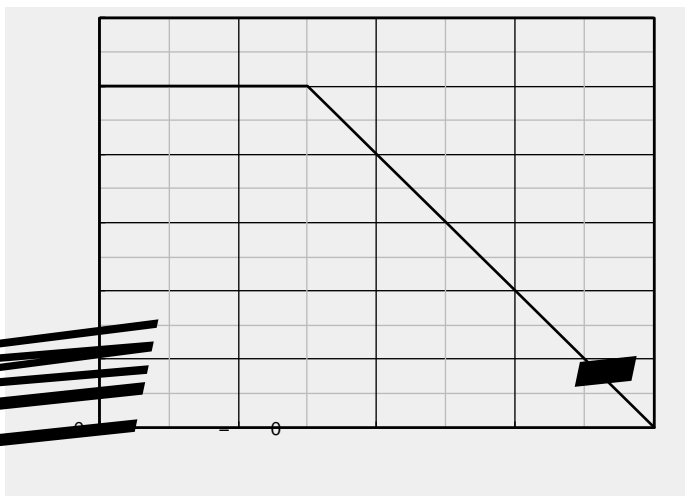
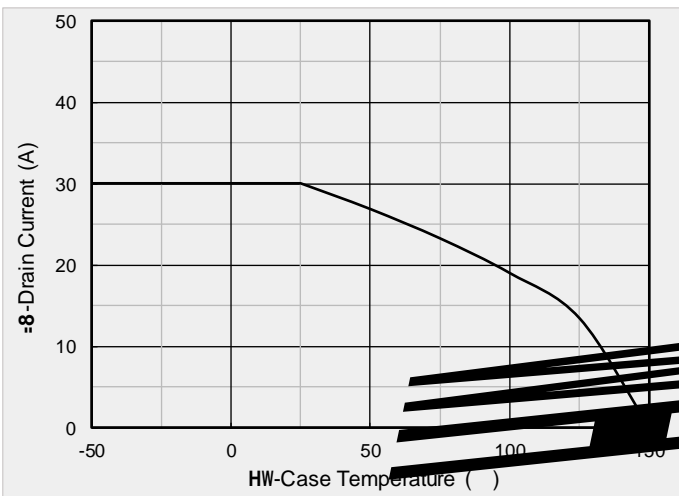


Figure 10. Normalized Threshold voltage



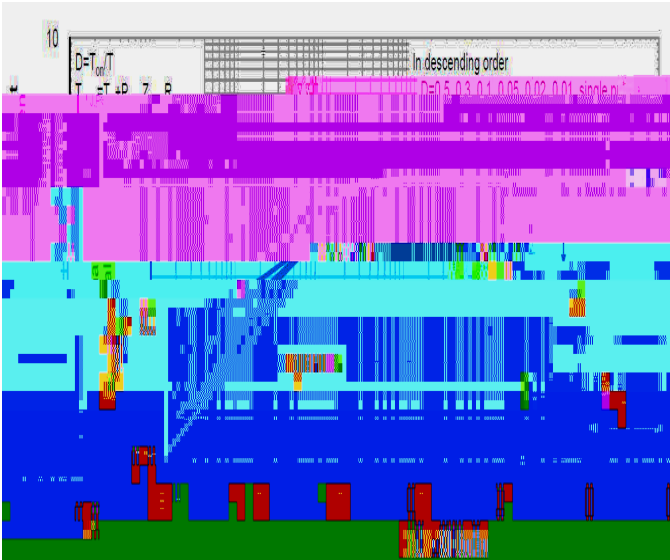


Figure 13. Normalized Maximum Transient Thermal Impedance

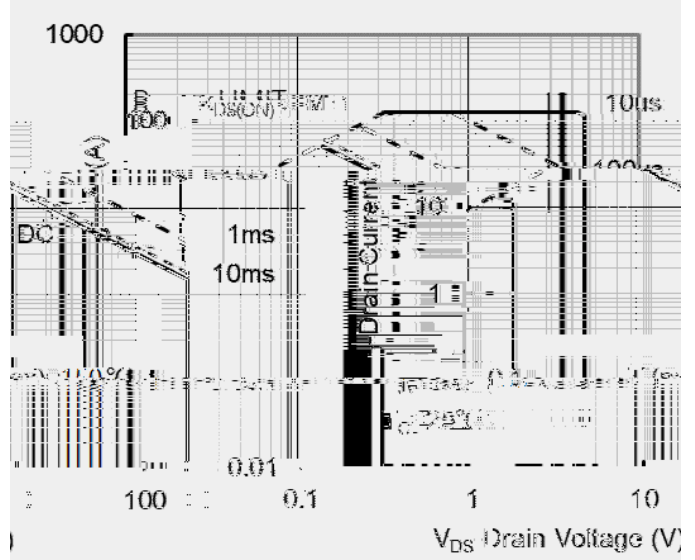
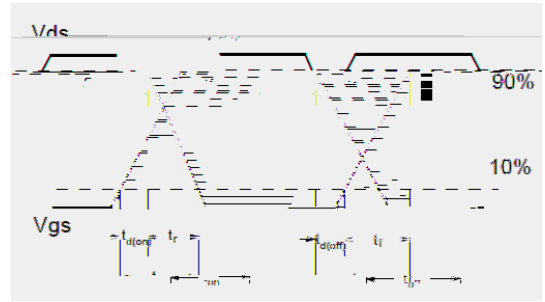
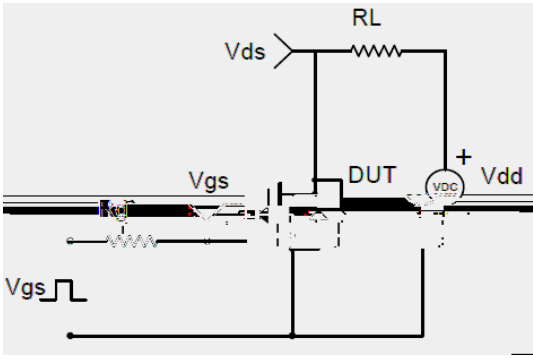
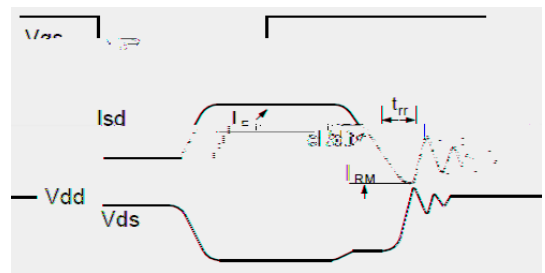
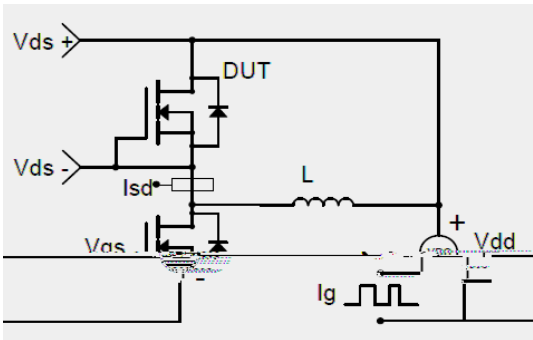


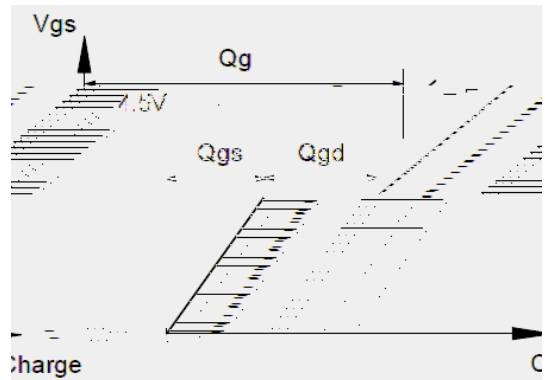
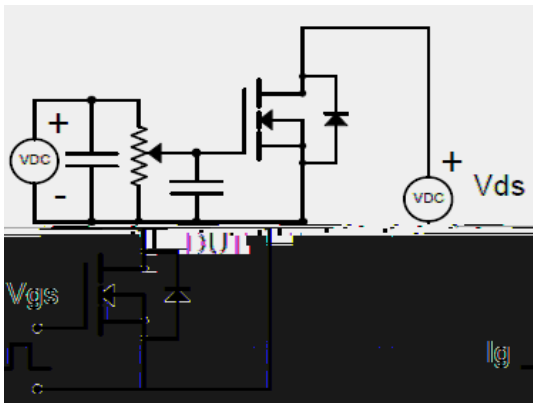
Figure 14. Safe Operation Area



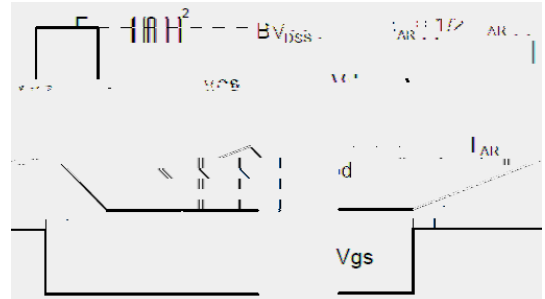
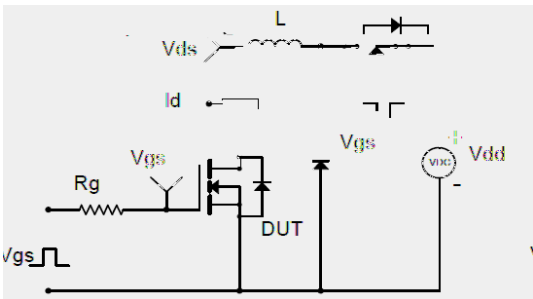
FYg]gh]jY'Gk]hW\]b['HYgh'7]fWi]h' /' KUjYZcf ag'



8]cXY'FYWc jYfm'HYgh'7]fWi]h' /' KUjYZcf ag'



;UhY'7\Uf[Y'HYgh'7]fWi]h' /' KUjYZcf a'



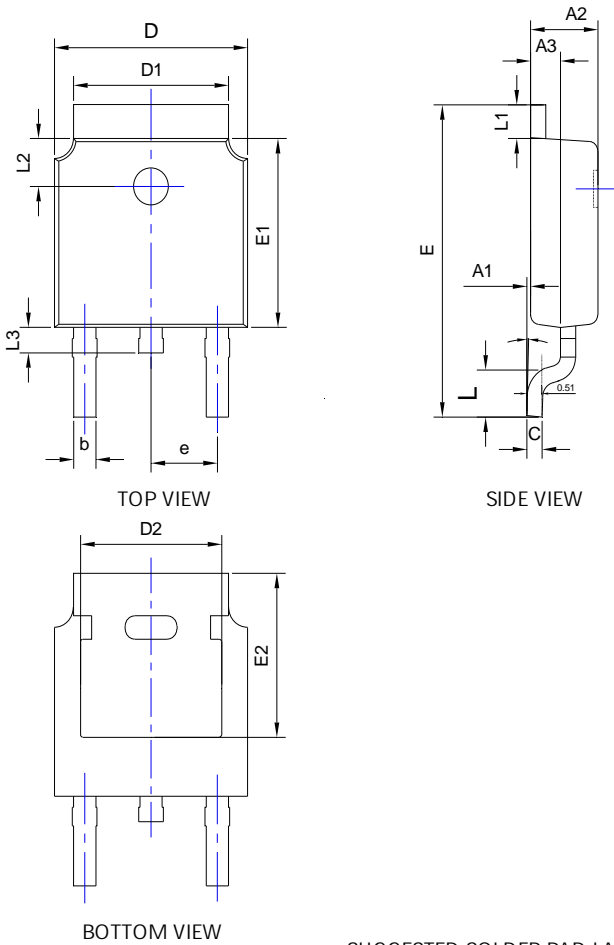
I bW'U a dYX' =bXi Wh]jY'Gk]hW\]b['fI =Gt' HYgh'7]fWi]h' /' KUjYZcf ag'

:



M>8 '\$B\$&5

HC!&)&!6''DUW_U[Y']bZcf a Uh]cb'



SUGGESTED SOLDER PAD LAYOUT

SYMBOL	DIMENSIONS				
	INCHES			Millimeter	
	MIN.	NOM.	MAX.	MIN.	NOM. MAX.
A1	0.000		0.008	0.000	0.200
A2	0.087	0.091	0.094	2.200	2.400
A3	0.035	0.039	0.043	0.900	1.100
b	0.026	0.030	0.034	0.660	0.860
c	0.018	0.020	0.023	0.460	0.580
D	0.256	0.260	0.264	6.500	6.700
D1					
D2	0.181	0.189	0.195	4.600	4.950
E	0.390	0.398	0.406	9.900	10.300
E1	0.236	0.240	0.244	6.000	6.200
E2					
e	0.090BSC			2.286BSC	
L	0.049	0.059	0.069	1.250	1.750
L1					
L2	0.055		0.075	1.400	1.900
L3	0.024	0.031	0.039	0.600	1.000
L4		0.114REF			
	0°		10°	0°	10°

NOTE:

- 1.PACKAGE BODY SIZES EXCLUDE MOLD FLASH AND GATE BURRS.
- 2.TOLERANCE 0.1mm UNLESS OTHERWISE SPECIFIED.
- 3.THE PAD LAYOUT IS FOR REFERENCE PURPOSES ONLY.

