



## N-Channel Enhancement Mode Field Effect Transistor

### Product Summary

$V_{DS}$	100V
$I_D$	50A
$R_{DS(ON)}$ ( at $V_{GS}=10V$ )	14m
$R_{DS(ON)}$ ( at $V_{GS}=4.5V$ )	20m
100% EAS Tested	
100% $V_{DS}$ Tested	

### General Description

Split gate trench 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

### Applications

Power switching application  
Uninterruptible power supply  
DC-DC convertor

### Absolute Maximum Ratings ( $T_A=25$ unless otherwise noted)

Parameter	Symbol	Limit	Unit
Drain-source Voltage	$V_{DS}$	100	V
Gate-source Voltage	$V_{GS}$	$\pm 20$	V
	$T_A=25$	9	
Drain Current	$I_D$		A





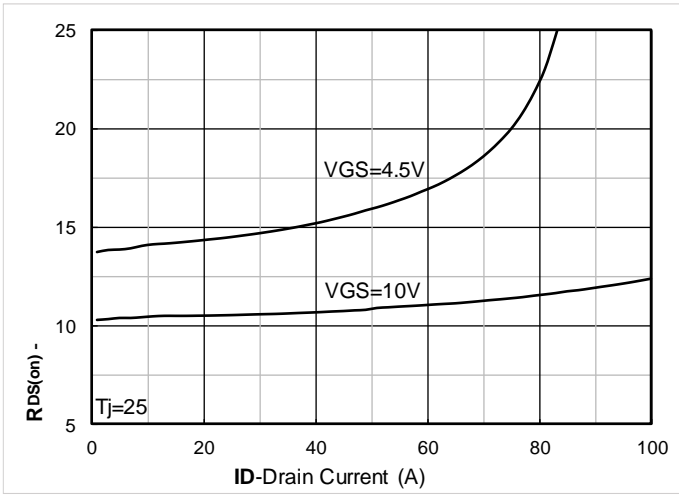


Figure 7. RDS(on) VS Drain Current

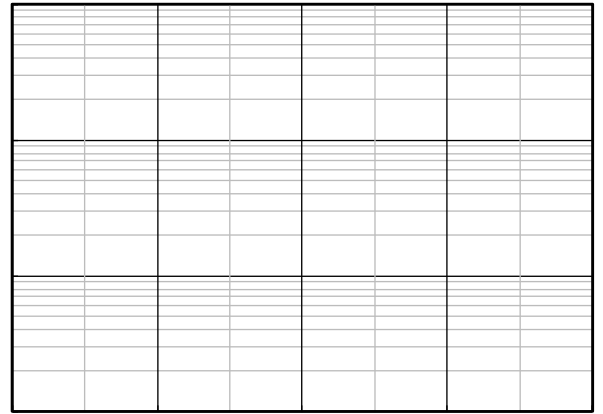


Figure 8. Forward characteristics of reverse diode

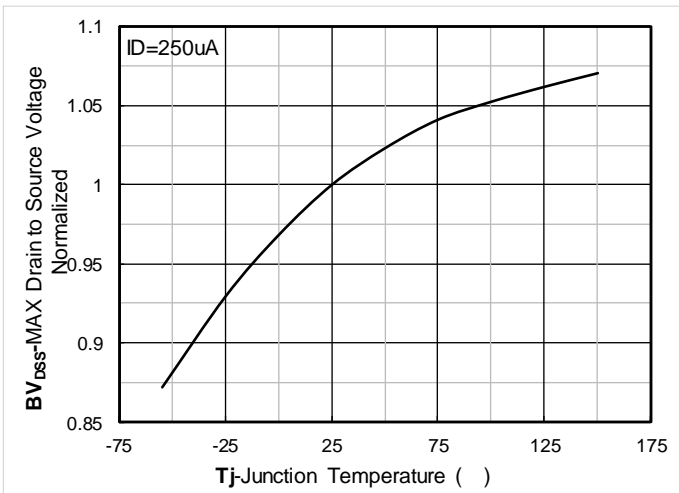


Figure 9. Normalized breakdown voltage

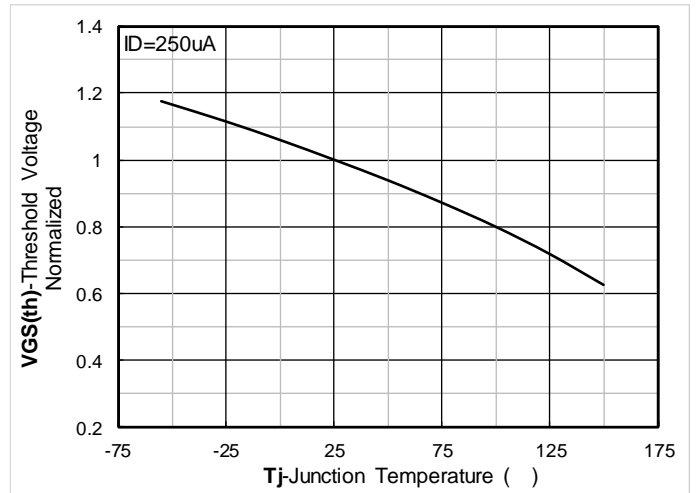
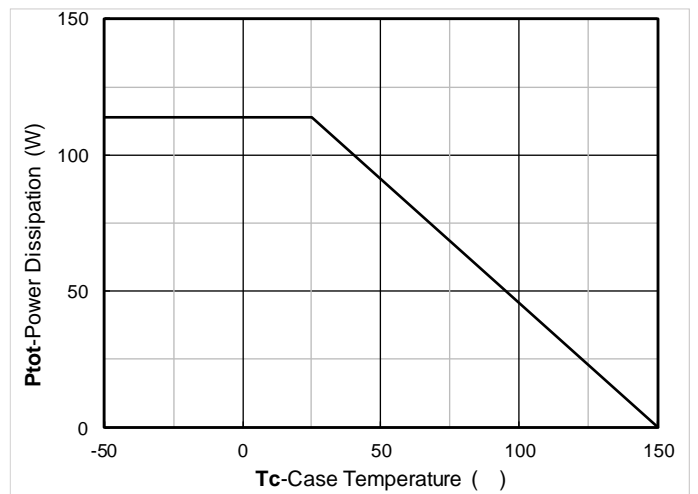
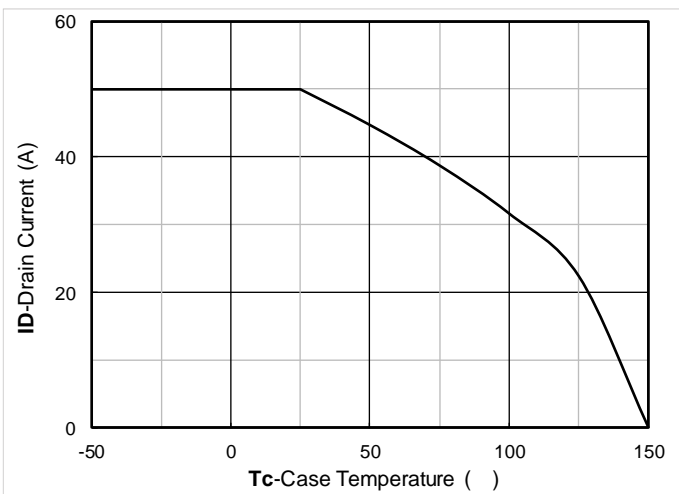


Figure 10. Normalized Threshold voltage



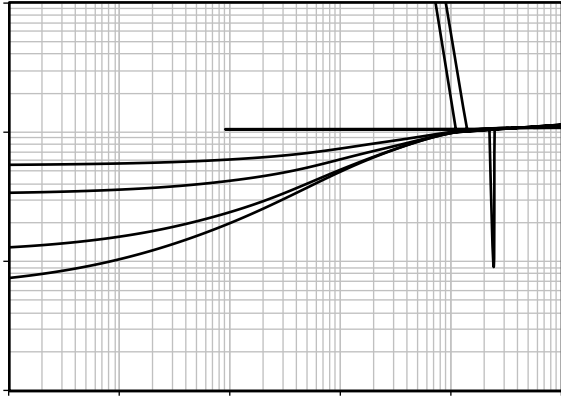


Figure 13. Maximum Transient Thermal Impedance

Figure 14. Safe Operation Area

### Test Circuits & Waveforms

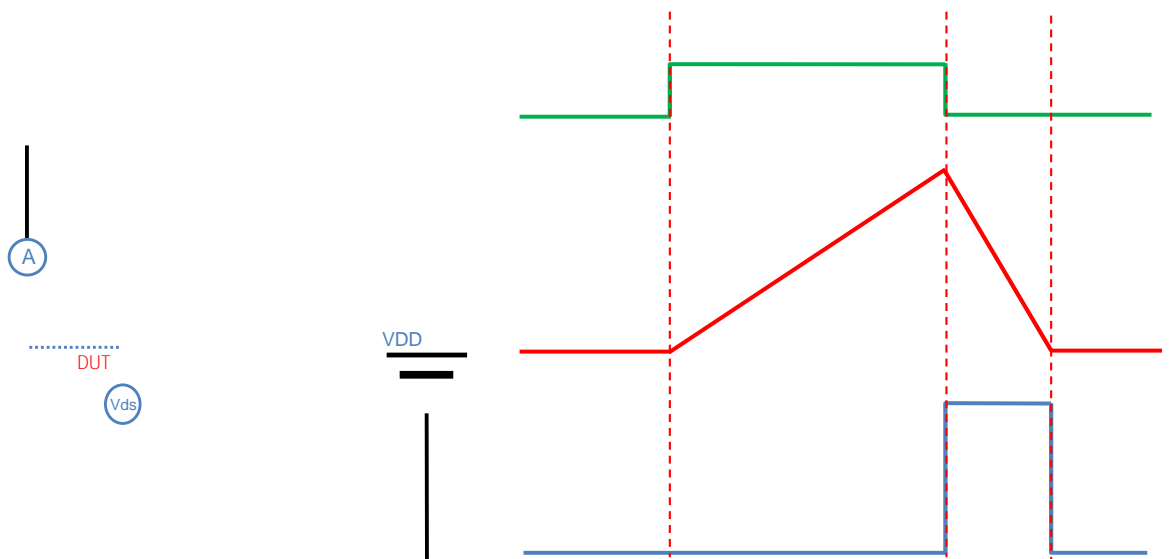


Figure A. Unclamped Inductive Switching (UIS) Test Circuit & Waveform

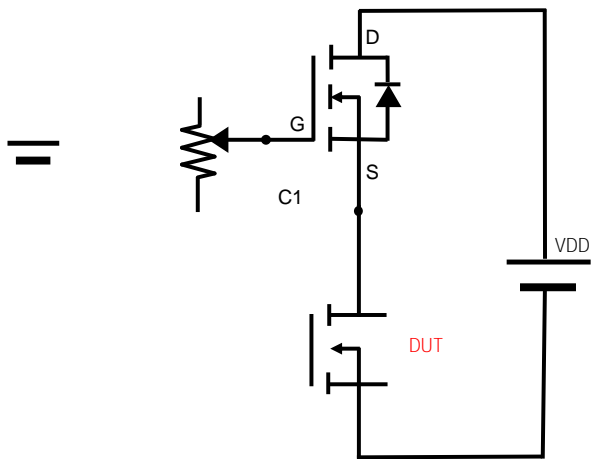


Figure B. Gate Charge Test Circuit & Waveform

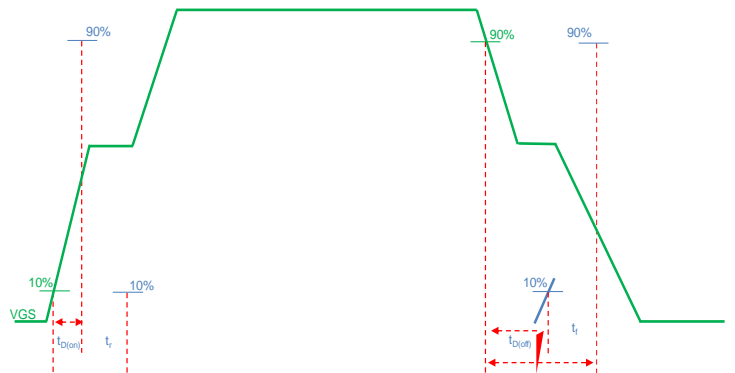
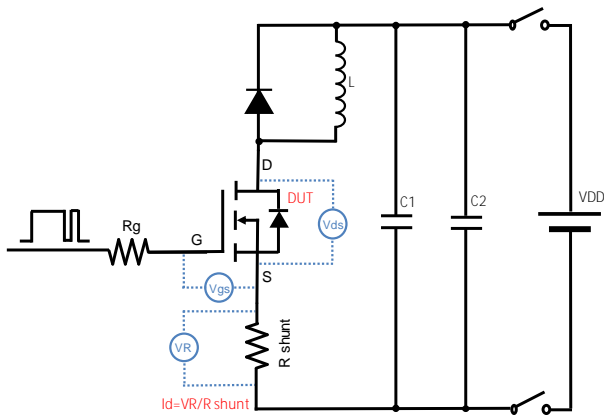


Figure C. Resistive Switching Test Circuit & Waveform

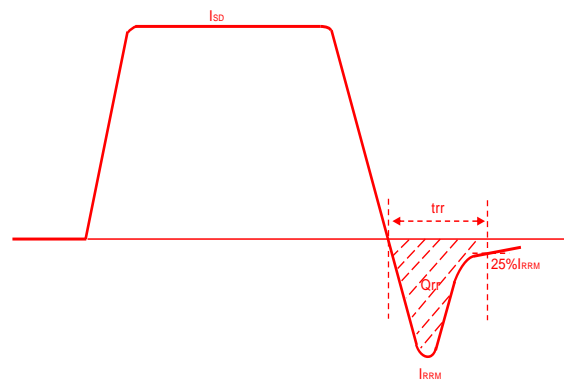
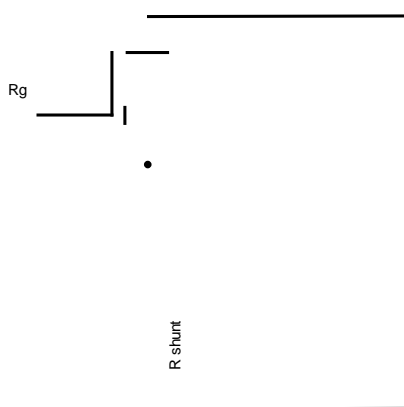
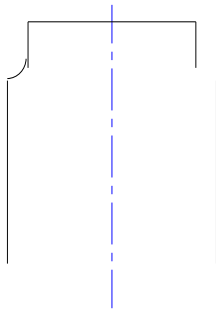
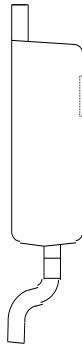
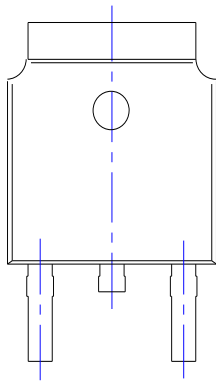


Figure D. Diode Recovery Test Circuit & Waveform



### TO-252-B Package information



SYMBOL	INCHES				
	MIN.	NOM.			
A1	0.000				
A2	0.087	0.091			
A3	0.035	0.039			
b	0.026	0.030			
c	0.018	0.020			
D	0.256	0.260			
D1					
D2	0.181	0.189			
E	0.390	0.398			
E1	0.236	0.240			

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.

