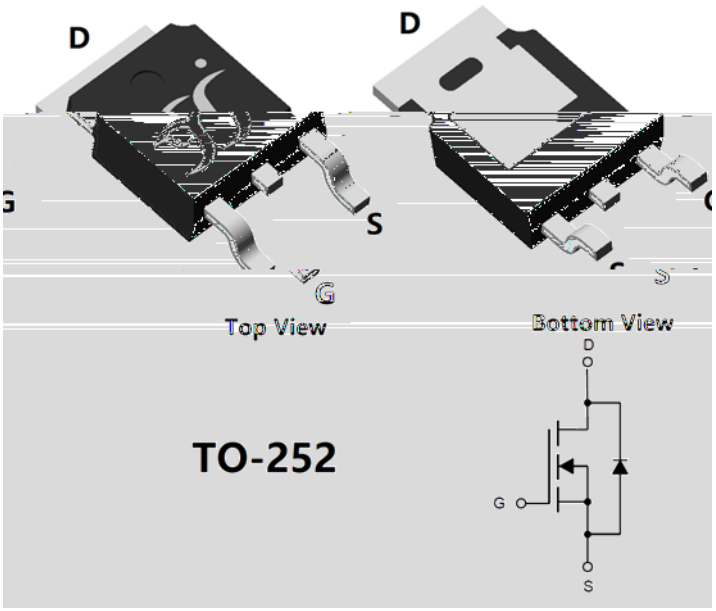
N-Channel Enhancement Mode Field Effect Transistor



Product Summary

V_{DS}	100V
I_D	27A
$R_{DS(ON)}$(at V_{GS}=10V)	29m
$R_{DS(ON)}$(at V_{GS}=4.5V)	47m

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 $R_{DS(ON)}$
Extremely low switching loss
Excellent stability and uniformity
Fast switching and soft recovery
Moisture Sensitivity Level 1
Epoxy Meets UL 94 V-0 Flammability Rating
Halogen Free

Applications

Power switching application
Hard switched and high frequency circuits
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}	±20	V
Drain Current	T_A=25℃	I_D	6	A
	T_A=100℃		4	
	T_C=25℃		27	
	T_C =100℃		19	
Pulsed Drain Current [A]		I_{DM}	80	A
Avalanche energy [B]		EAS	27.5	mJ
Total Power Dissipation [C]	T_A=25℃	P_D	3	W
	T_A=100℃		1.5	
	T_C=25℃		50	
	T_C =100℃		25	
Junction and Storage Temperature Range		T_J ,T_{STG}	-55 +175	℃

Thermal resistance

Parameter		Symbol	Typ	Max	Units
Thermal Resistance Junction-to-Ambient [D]	Steady-State	R	40	50	℃/W
Thermal Resistance Junction-to-Case	Steady-State	R	2.5	3	

Ordering Information (Example)

PREFERED P/N	PACKING CODE	Marking	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
YJD27G10A	F1/F2	YJD27G10A	2500	/	25000	

YJD27G10A

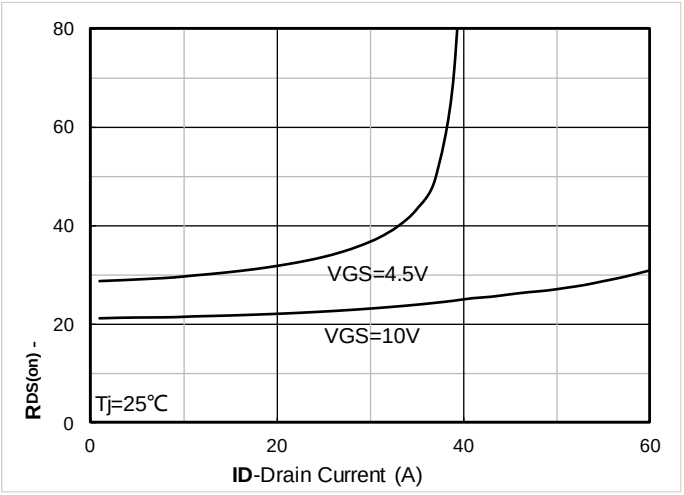


Figure 7. $R_{DS(on)}$ VS Drain Current

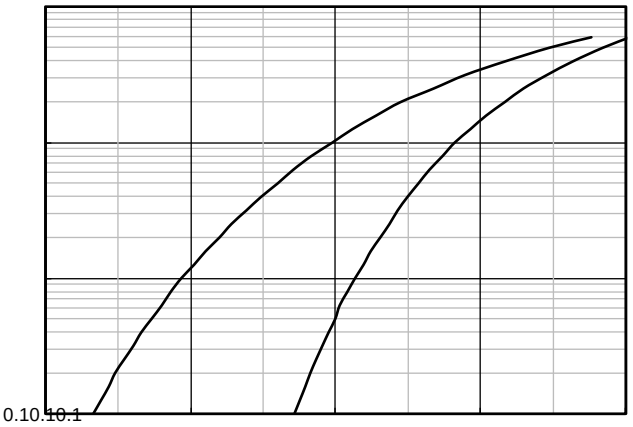


Figure 8. Forward characteristics of reverse diode

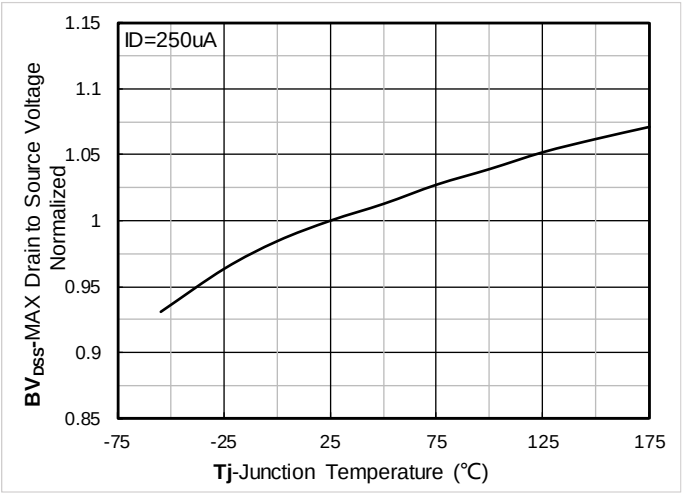


Figure 9. Normalized breakdown voltage

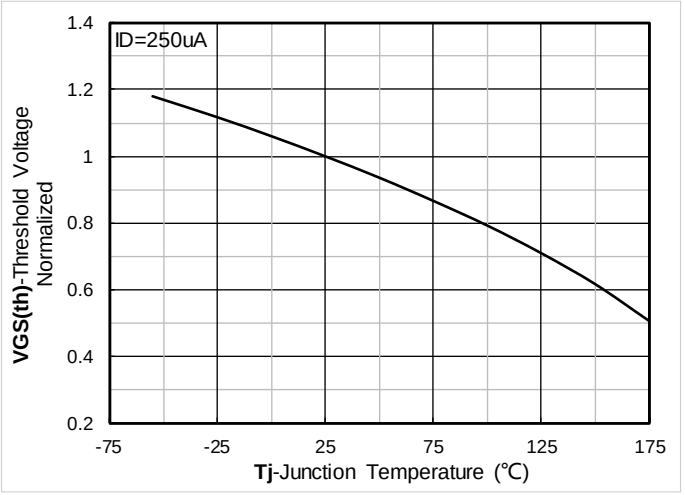


Figure 10. Normalized Threshold voltage

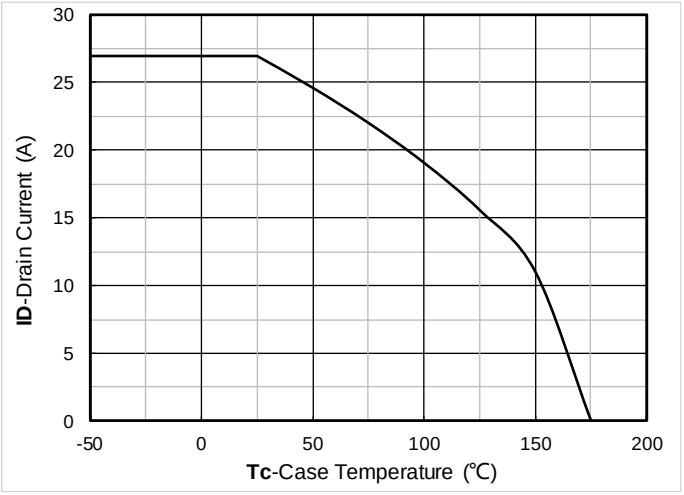


Figure 11. Current dissipation

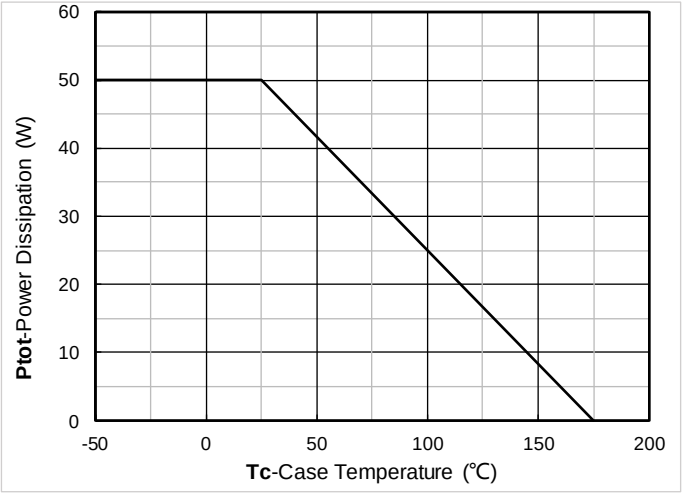


Figure 12. Power dissipation

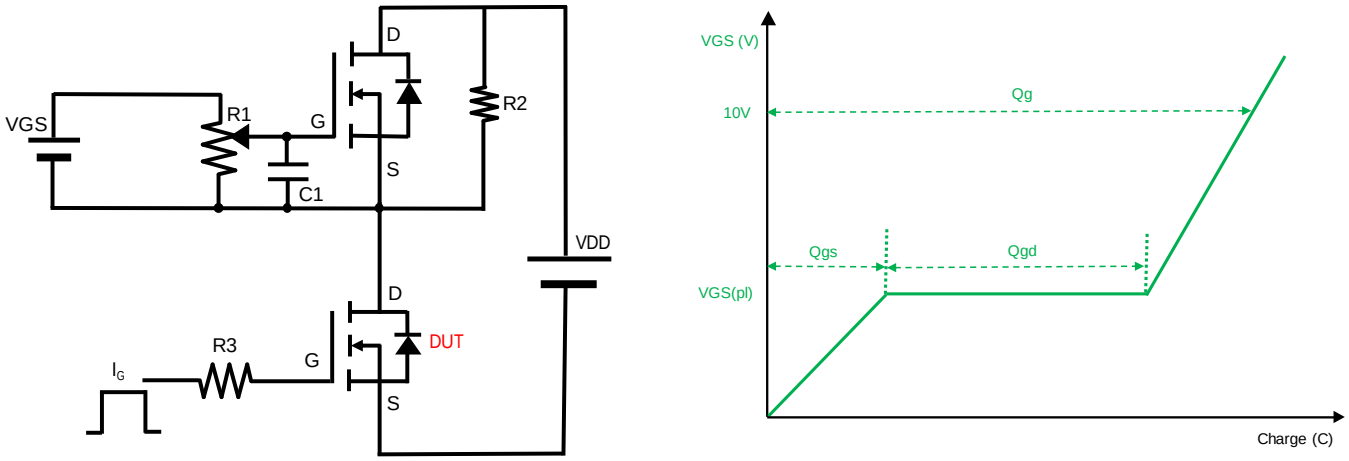


Figure B. Gate Charge Test Circuit & Waveform

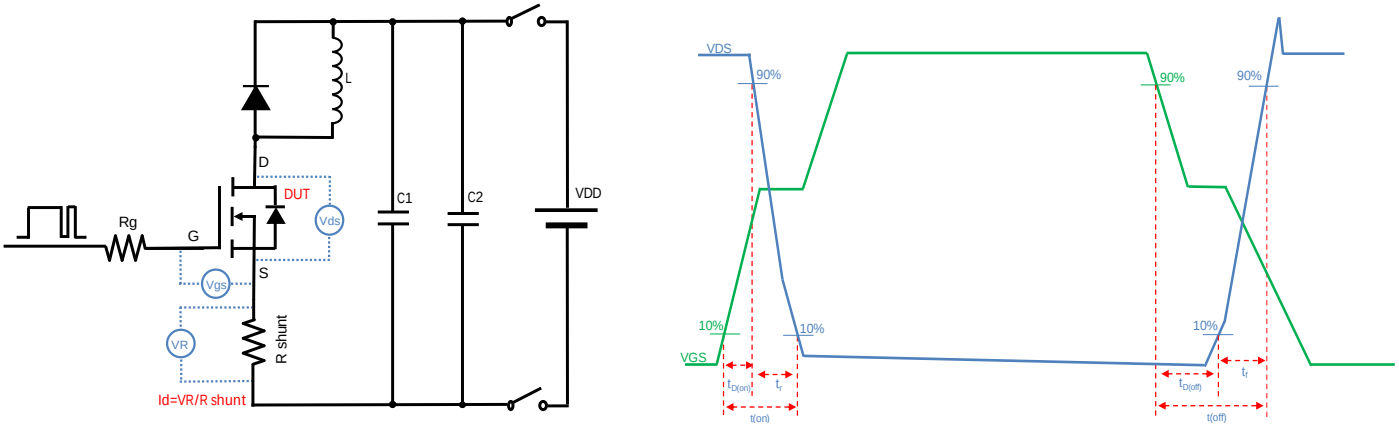


Figure C. Resistive Switching Test Circuit & Waveform

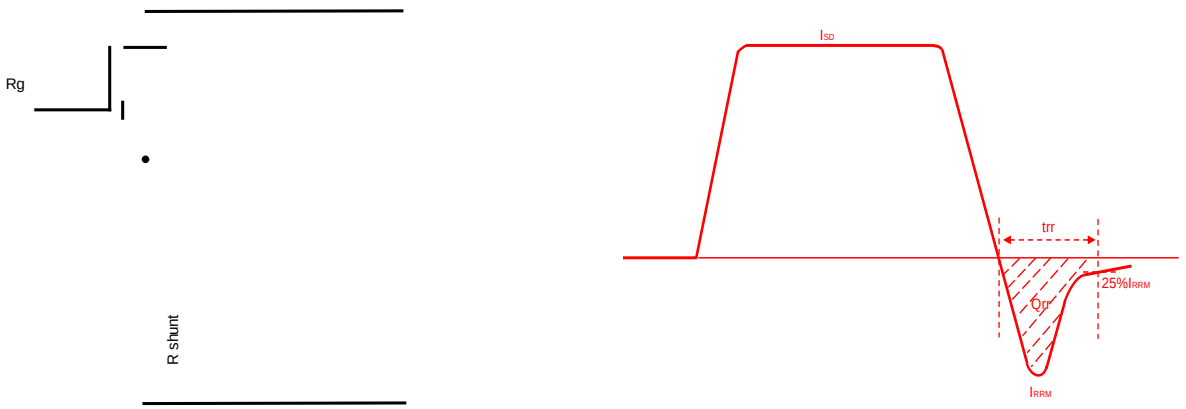
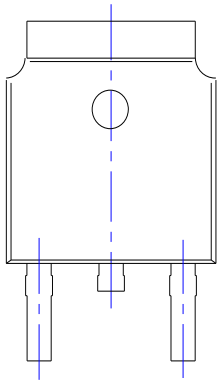
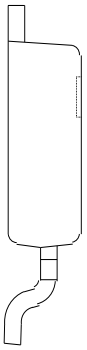


Figure D. Diode Recovery Test Circuit & Waveform

TO-252-B Package information

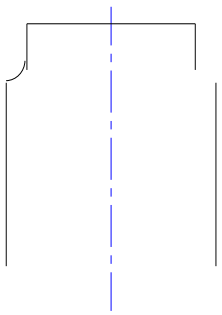


TOP VIEW



SIDE VIEW

DIMENSIONS					
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			



BOTTOM VIEW

SUGGESTED SOLDER PAD LAYOUT

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.

YJD27G10A