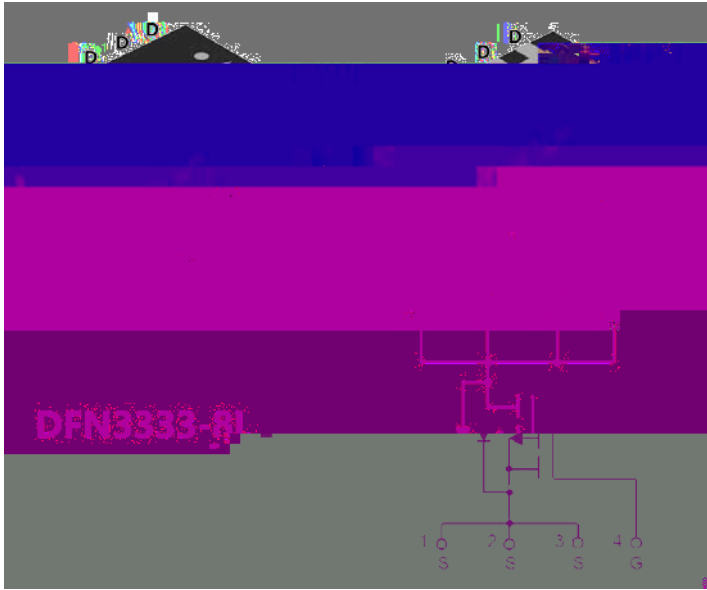




P-Channel Enhancement Mode Field Effect Transistor



Product Summary

- V_{DS} -100V
- I_D -15A
- $R_{DS(ON)}$ (at $V_{GS}=10V$) 110m Ω
- $R_{DS(ON)}$ (at $V_{GS}=4.5V$) 120m Ω
- 100% EAS Tested

General Description

- Split gate trench MOSFET technology
- Excellent package for heat dissipation
- High density cell design for low $R_{DS(ON)}$
- Part no. with suffix "Q" means AEC-Q101 qualified

Applications

- Power switching application
- Uninterruptible power supply
- DC-DC convertor
- 12V, 24V and 48V Automotive systems

■ Absolute Maximum Ratings ($T_A=25^\circ\text{C}$ 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	-3.9	A
	$T_A=100$		-2.5	
	$T_C=25$		-15	
	$T_C=100$		-9.5	
Pulsed Drain Current ^A		I_{DM}	-35	A
Avalanche energy ^B		EAS	64	mJ
Total Power Dissipation ^C	$T_A=25$	P_D	2.5	W
	$T_A=100$		1	
	$T_C=25$		43	
	$T_C=100$		17.2	
Junction and Storage Temperature Range		T_J, T_{STG}	-55 +150	

■ Thermal resistance

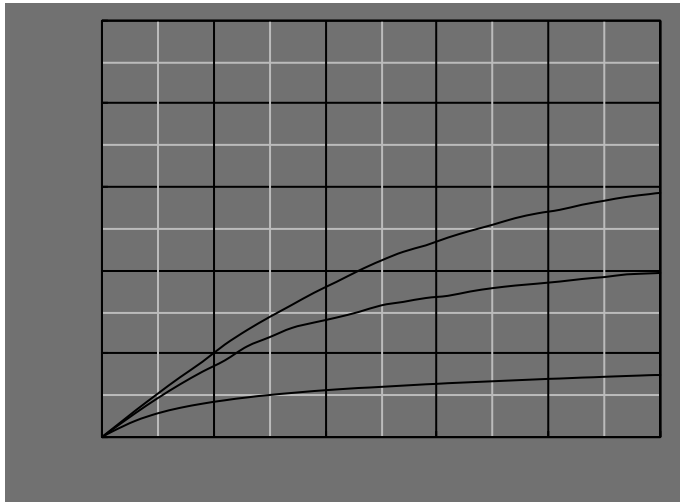
Parameter		Symbol	Typ	Max	Units
Thermal Resistance Junction-to-Ambient ^D	Steady-State	$R_{\theta JA}$	40	50	/W
Thermal Resistance Junction-to-Case	Steady-State	$R_{\theta JC}$	2.4	2.9	

■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	Marking	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
YJQ15GP10AQ	F1	Q15GP10A	5000	10000	100000	13" reel



■ Typical Electrical and Thermal Characteristics Diagrams





YJQ15GP10AQ

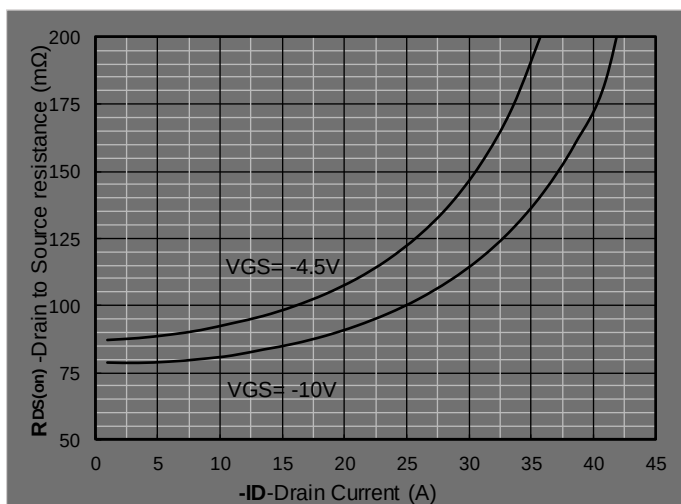


Figure 7. $R_{DS(on)}$ VS Drain Current

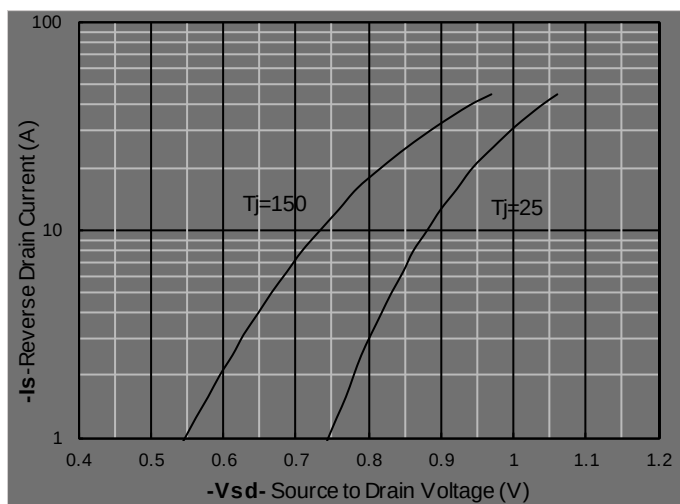


Figure 8. Forward characteristics of reverse diode

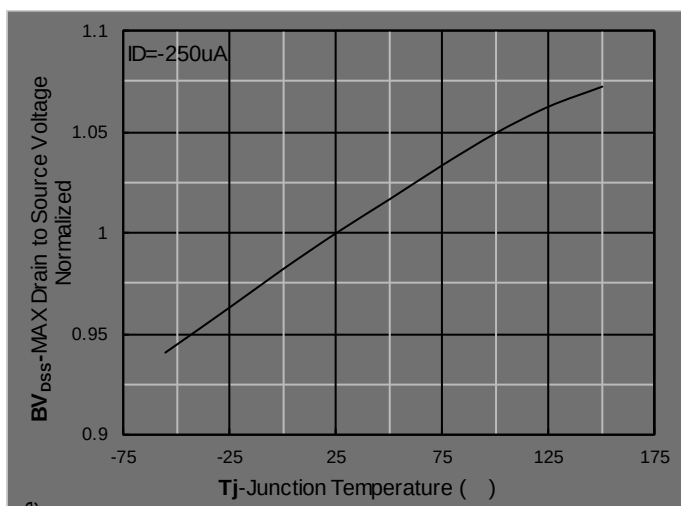


Figure 9. Normalized breakdown voltage

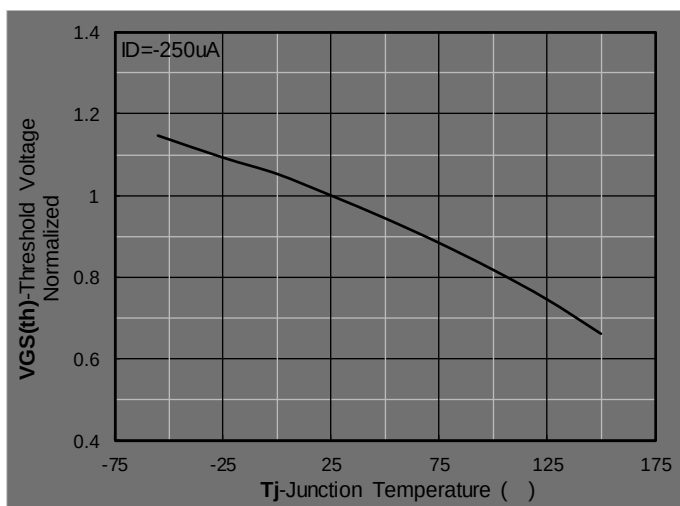
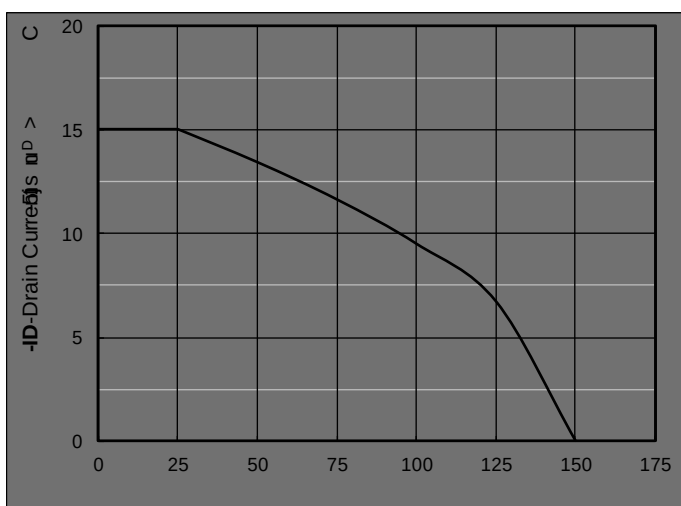


Figure 10. Normalized Threshold voltage





DFN3333-8L Package information

