- V_{DS} -30V
- I_D -4.1A
- $R_{DS(ON)}$(at V_{GS}=-10V) 47mΩ
- $R_{DS(ON)}$(at V_{GS}=-4.5V) 65mΩ

- Low $R_{DS(on)}$ & FOM
- Extremely low switching loss
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free
- Part no. with suffix “Q” means AEC-Q101 qualified

- Power management
- Portable equipment

■ (T_A=25 unless otherwise noted)

Drain-source Voltage		V_{DS}	-30	V
Gate-source Voltage		V_{GS}	±20	V
Drain Current	T_A=25	I_D	-4.1	A
	T_A =100		-2.5	
Pulsed Drain Current [A]		I_{DM}	-20	A
Total Power Dissipation [B]	T_A=25	P_D	1.2	W
	T_A =100			

■

■ (T_J=25 unless otherwise noted)

Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}= 0V, I_D=-250μA	-30			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-30V, V_{GS}=0V			-1	uA
Gate-Body Leakage Current	I_{GSS}	V_{GS}=±20V, V_{DS}=0V			±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}= V_{GS}, I_D=-250μA	-1	-1.5	-2.4	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}=-10V, I_D=-4.1A		35	47	mΩ
		V_{GS}=-4.5V, I_D=-3.5A		50	65	mΩ
Diode Forward Voltage	V_{SD}	I_S=-4.1A, V_{GS}=0V			-1.2	V
Gate resistance	R_G	f=1MHz		17.5		Ω
Input Capacitance	C_{iss}	V_{DS}=-15V, V_{GS}=0V, f=1MHz		471		pF
Output Capacitance	C_{oss}			84		
Reverse Transfer Capacitance	C_{rss}			69		
Total Gate Charge	Q_g	V_{GS}=-10V, V_{DS}=-15V, I_D=-4.1A	-	9	-	nC
Gate-Source Charge	Q_{gs}		-	1.5	-	
Gate-Drain Charge	Q_{gd}		-	2.3	-	
Reverse Recovery Charge	Q_{rr}	I_F=-4.1A, di/dt=100A/us	-	12	-	nC
Reverse Recovery Time	t_{rr}		-	32	-	ns
Turn-on Delay Time	$t_{D(on)}$	V_{GS}=-10V, V_{DD}=-15V, I_D=-4.1A R_{GEN}=2.5Ω	-	9	-	ns
Turn-on Rise Time	t_r			3		
Turn-off Delay Time	$t_{D(off)}$			29		
Turn-off fall Time	t_f			15		

A. Repetitive rating; pulse width limited by max. junction temperature.
B. P_d is based on max. junction temperature, using junction-ambient thermal resistance.
C. The value of $R_{\theta JA}$ is measured with the device mounted on 1 in^2 FR-4 board with 2oz. Copper, in the still air environment with T_A =25 . The maximum allowed junction temperature of 150 . The value in any given application depends on the user's specific board design.

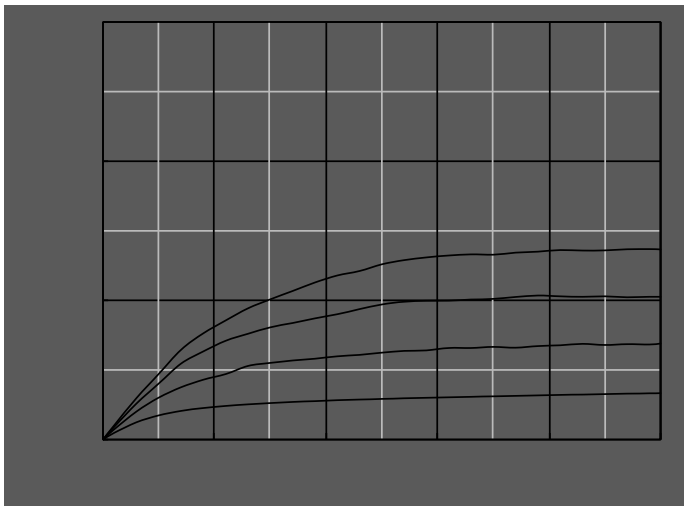


Figure 1. Output Characteristics

Figure 2. Transfer Characteristics

Figure 3. Capacitance Characteristics

Figure 4. Gate Charge

Figure 5. On-Resistance vs Gate to Source Voltage

Figure 6. Normalized On-Resistance

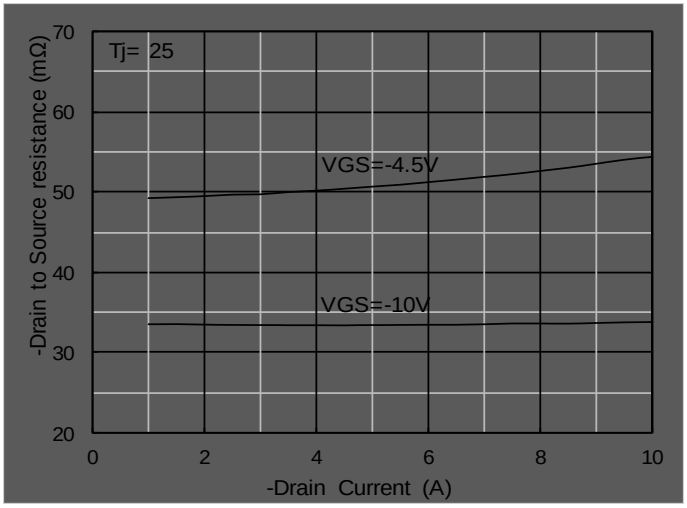


Figure 7. $R_{DS(on)}$ VS Drain Current

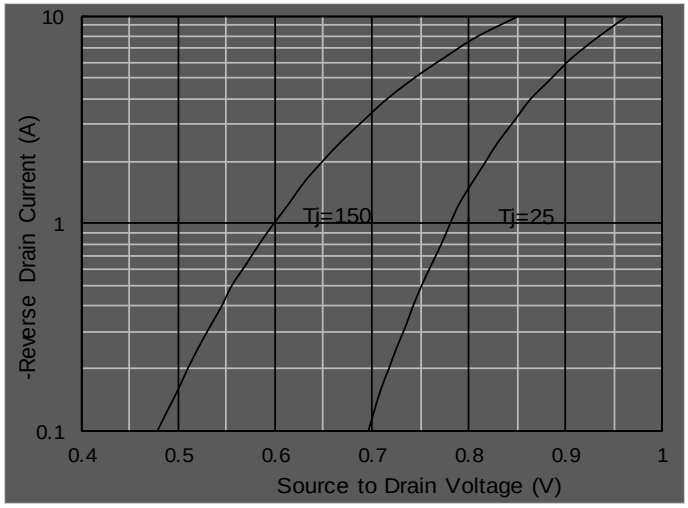


Figure 8. Forward characteristics of reverse diode

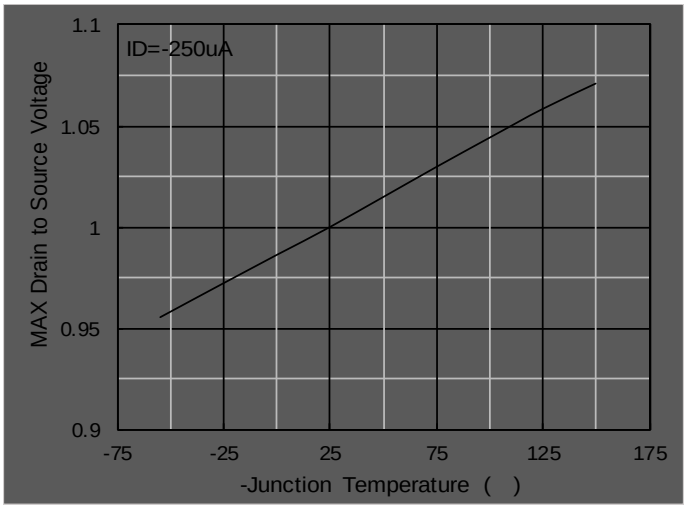


Figure 9. Normalized breakdown voltage

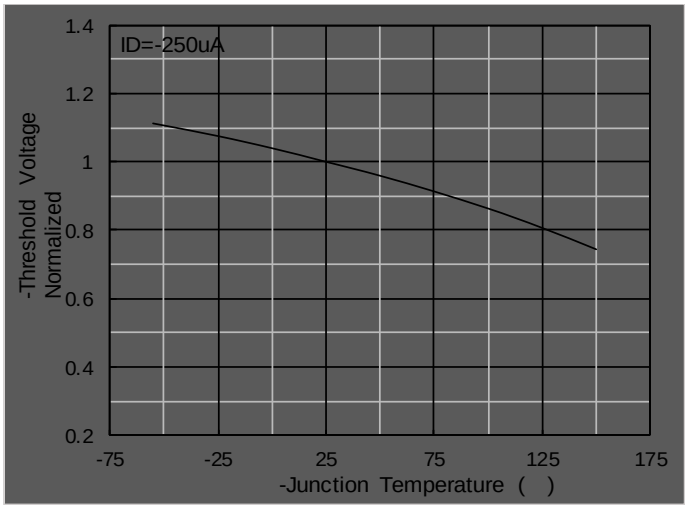


Figure 10. Normalized Threshold voltage

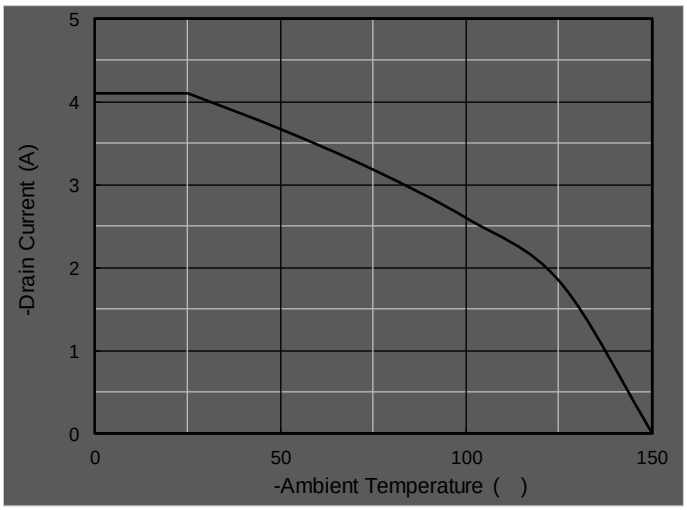


Figure 11. Current dissipation

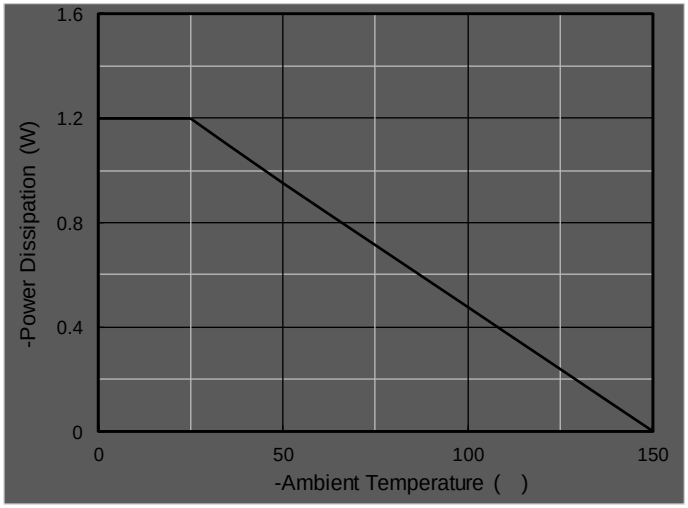
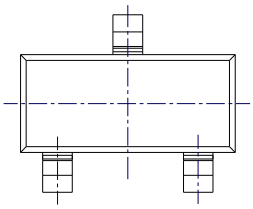
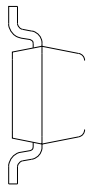


Figure 12. Power dissipation

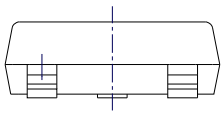
■



TOP VIEW



SIDE VIEW



UNIT mm

SUGGESTED SOLDER PAD LAYOUT

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