$_{DS(ON)}$(at V_{GS}=10V) 10 mohm
- $R_{DS(ON)}$(at V_{GS}=4.5V) 15 mohm
- 100% EAS Tested
- 100% V_{DS} Tested

General Description

- Split gate trench MOSFET technology
- High density cell design for low $R_{DS(ON)}$
- High Speed switching
- Moisture Sensitivity Level 1
- Part no. with suffix “Q” means AEC-Q101 qualified

Applications

- DC-DC Converters
- Power management functions
- Industrial and Motor Drive application
- 12V, 24V Automotive systems

■ Absolute Maximum Ratings (T_A=25 unless otherwise noted)

Parameter		Symbol	N-Die1/Die2	Unit
	T_A = 25		12	
	T_A=100		7	
Pulsed Drain Current [A]		I_{DM}	150	A
Avalanche energy [B]		E_{AS}	162	mJ
Total Power Dissipation[C]	T_C=25	P_D	69	W
	T_C=100		27	
	T_A=25		2.5	
$_{\theta J}$	T_A=100		1	
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	Steadx yatd R				

■ NMOS(Die1/Die2) Typical Performance Characteristics

Figure1. Output Characteristics

Figure2. Transfer Characteristics

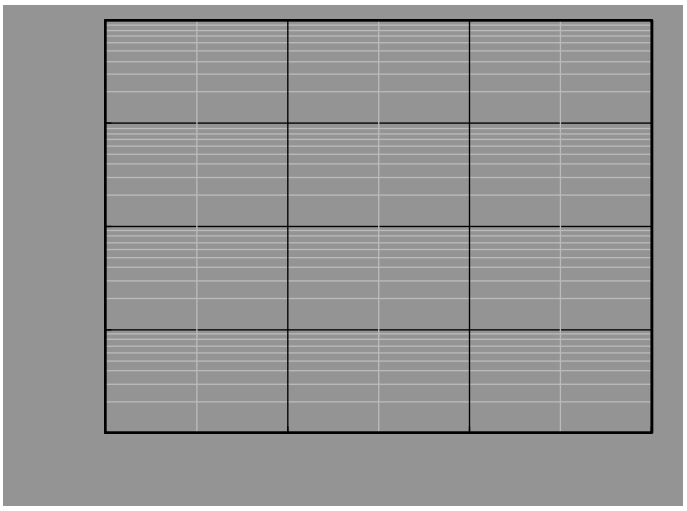


Figure3. Capacitance Characteristics

Figure4. Gate Charge

Figure5. On-Resistance vs. Gate to Source Voltage

Figure6. Normalized On-Resistance

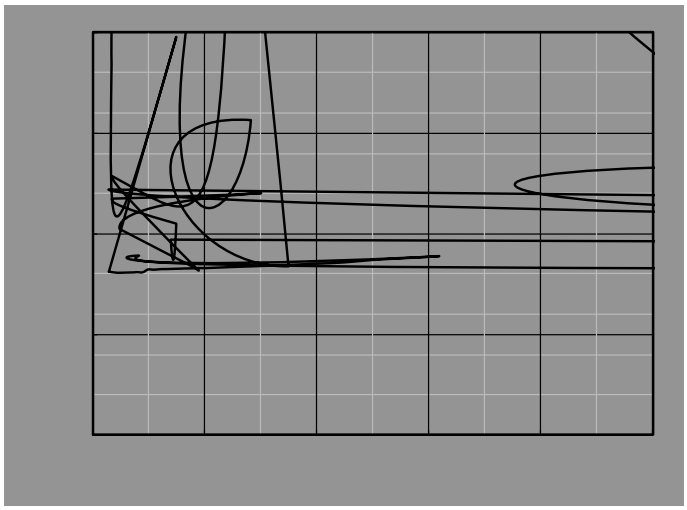


Figure 7. $R_{DS(on)}$ VS Drain Current

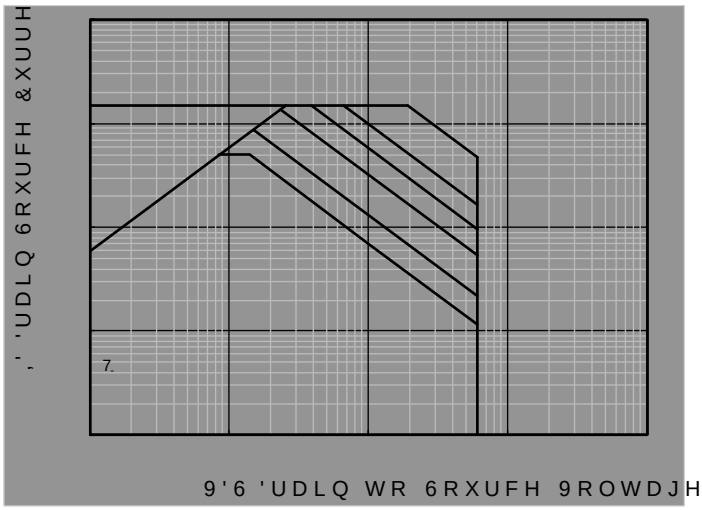
Figure 8. Forward characteristics of reverse diode

Figure 9. Normalized breakdown voltage

Figure 10. Normalized Threshold voltage

Figure 11. Current dissipation

Figure 12. Power dissipation



)LJXUH 0D[LPXP 7UDQVIHU &KDUDFWHULVWLF ,PSHGDQFH)LJXUH 6DIH 2SHUDWL