Features

- Low gate charge
- Improved dv/dt capability
- Improved ESD performance
- RoHS compliant
- JEDEC Qualification

Absolute Maximum Ratings

Parameter		Symbol	Value	Unit
Drain-Source Voltage		V_{DSS}	900	V
Gate-Source Voltage		V_{GS}	±30	V
Continuous Drain Current	T_C = 25	I_D	9	A
	T_C = 100		5.9	A
Pulsed Drain Current (Note 1)		I_{DM}	36	A
Single Pulse Avalanche Energy (Note 2)		E_{AS}	456	mJ
Repetitive Avalanche Current (Note 1)		I_{AR}	9	A
Repetitive Avalanche Energy (Note 1)		E_{AR}	31.2	mJ
Power Dissipation	T_C = 25	P_D	312	W
	Derate above 25		2.5	W/
Peak Diode Recovery dv/dt (Note 3)		dv/dt	4.5	V/ns

Electrical Characteristics : T_C=25 , unless otherwise noted

Note :
1. Repeated rating : Pulse width limited by safe operating area
2. L=10.6mH, I_{AS} = 9A, V_{DD} = 50V, R_G = 25Ω, Starting T_J= 25 , not subject to production test – verified by design/characterization
3 I_{SD} ≤ 9A, di/dt ≤ 200A/μs , V_{DD} ≤ BV_{DS}, Starting T_J= 25
4. Pulse Test :Pulse width ≤ 300μs, Duty Cycle ≤ 2%

Fig. 1 Output Characteristics

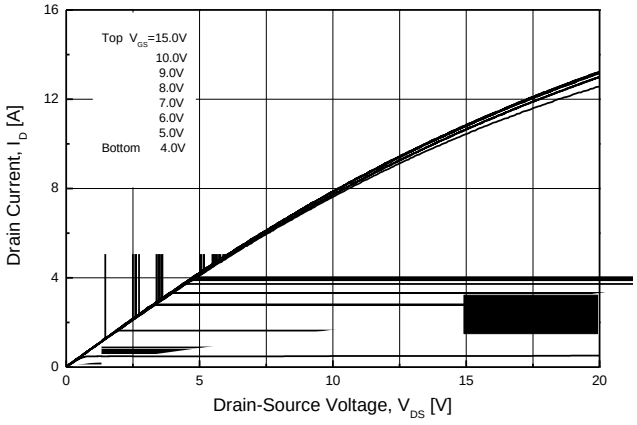


Fig. 2 Transfer Characteristics

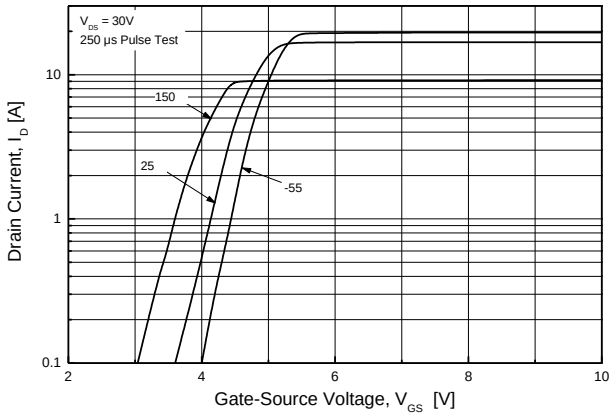


Fig. 3 On-Resistance vs.
Drain Current and Gate voltage

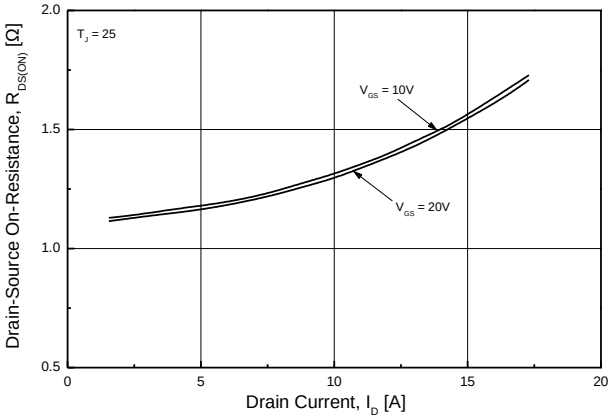


Fig. 4 Body Diode Forward Voltage vs.
Source Current and Temperature

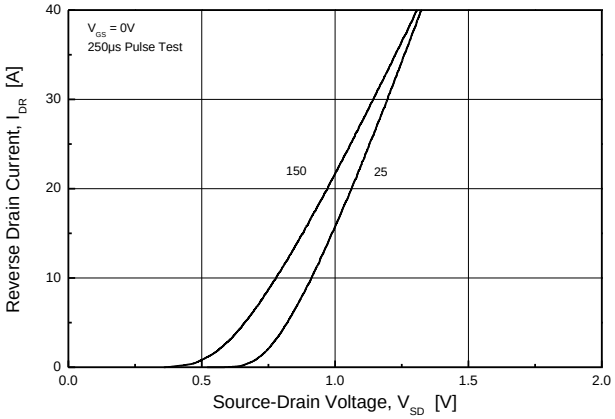


Fig. 5 Capacitance Characteristics

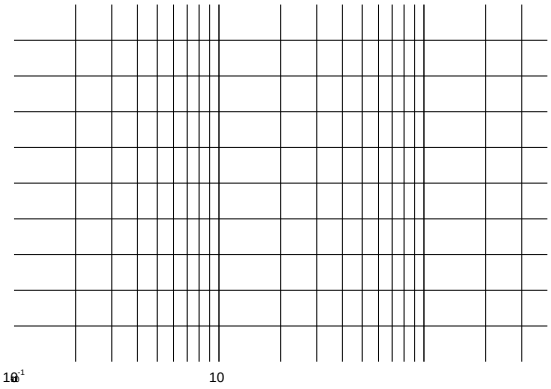


Fig. 6 Gate Charge Characteristics

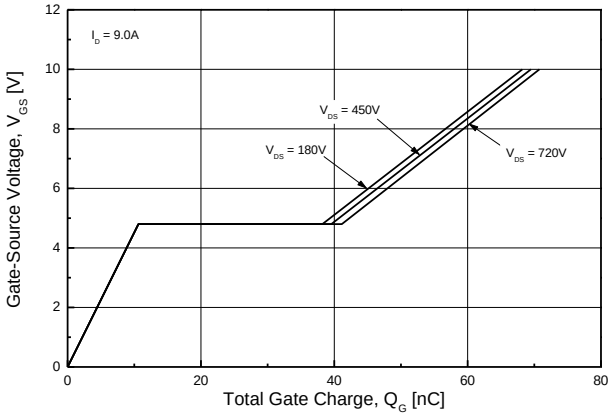


Fig. 7 Breakdown Voltage vs. Temperature

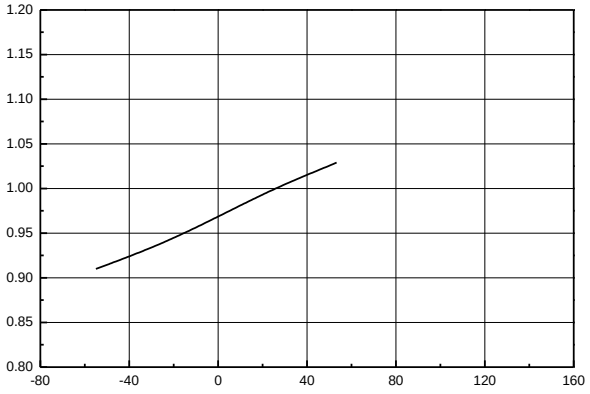


Fig. 8 On-Resistance vs. Temperature

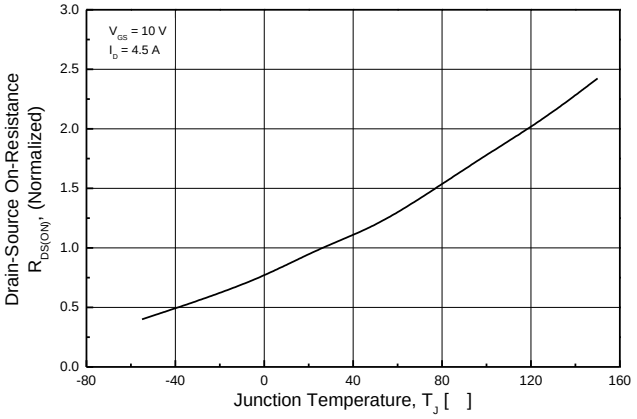


Fig. 9 Maximum Drain Current vs. Case Temperature

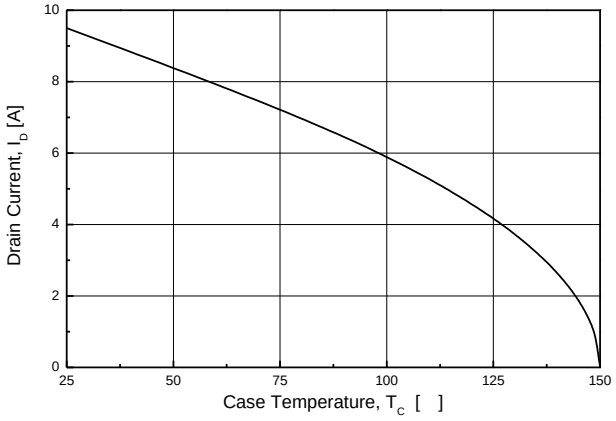


Fig. 10 Gate Threshold Voltage vs. Junction Temperature

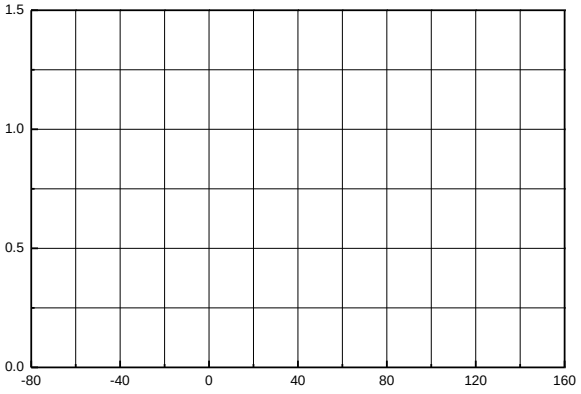


Fig. 11 Maximum Safe Operating Area

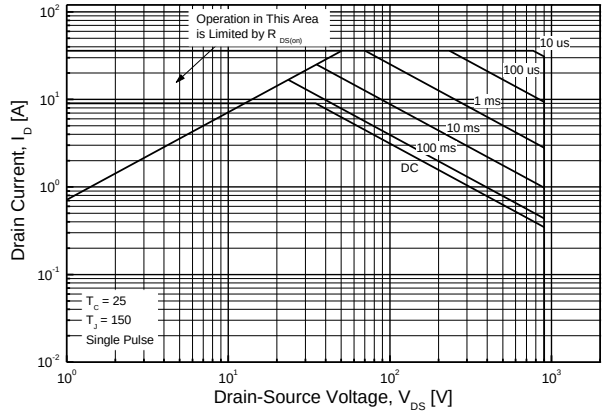
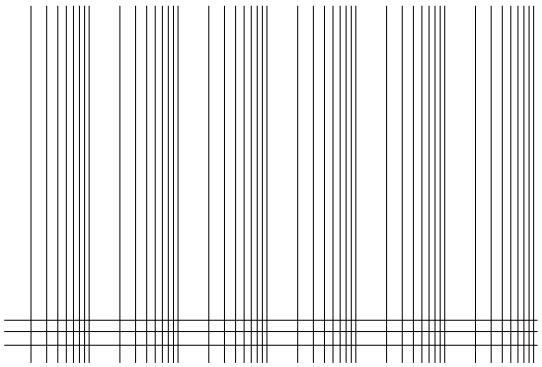
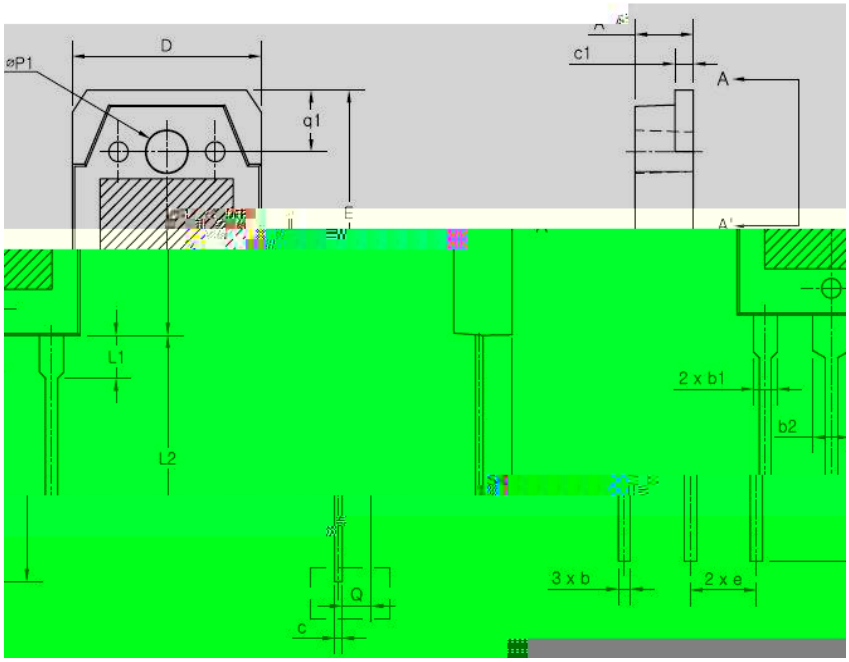
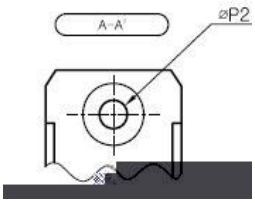


Fig. 12 Transient Thermal Response Curve



TO-3PN MECHANICAL DATA





SYMBOL	MIN	NOM	MAX
A	4.60	4.80	5.00
b	0.80	1.00	1.20
b1	1.80	2.00	2.20
b2	2.80	3.00	3.20
c	0.55	0.60	0.75
c1	1.45	1.50	1.65
D	15.40	15.60	15.80
E	19.70	19.90	20.10
e	5.15	5.45	5.75
L1	3.30	3.50	3.70
L2	19.80	20.00	20.20
øP1	3.30	3.40	3.50
øP2		(3.20)	
Q		2.40	
q1	4.80	5.00	

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