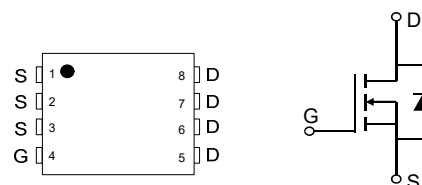
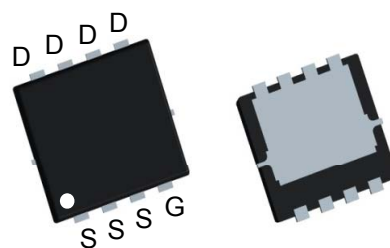


MOSFET (N-CHANNEL)
FEATURES

- Low on-resistance
- Fast switching speed
- Easily designed drive circuits
- Easy to parallel



PDFN3333

MECHANICAL DATA

- Case: PDFN3333
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Weight: 0.016 grams (approximate)
- **Marking:** Q150N03

MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-source voltage	V _{DS}	30	V
Gate-source voltage	V _{GS}	±20V	V
Continuous drain current	I _D	150	A
Power dissipation	P _D	75	W
Thermal resistance from Junction to ambient	R _{θJA}	20	°C/W
Junction and Storage temperature	T _J , T _{STG}	-55 ~ +150	°C

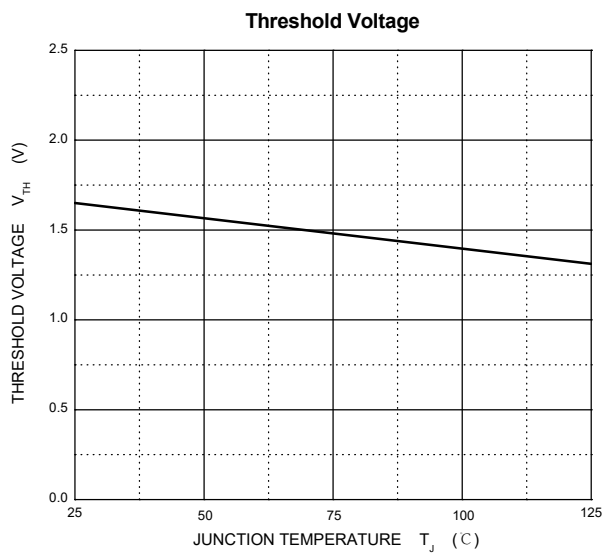
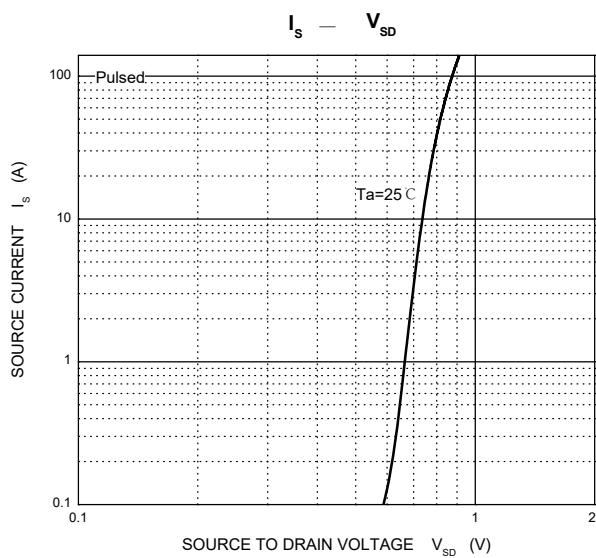
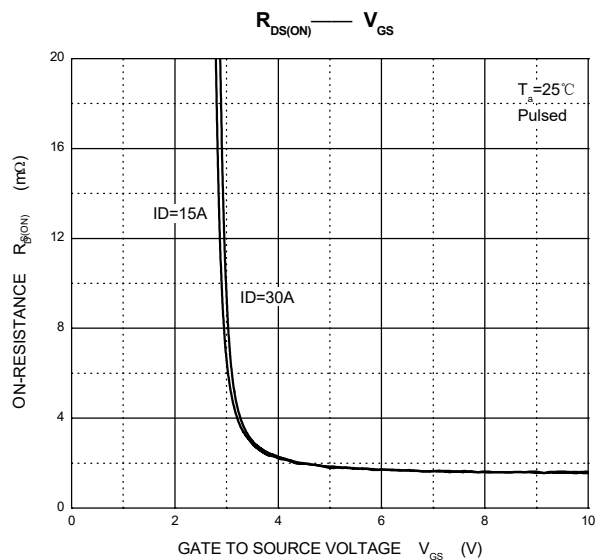
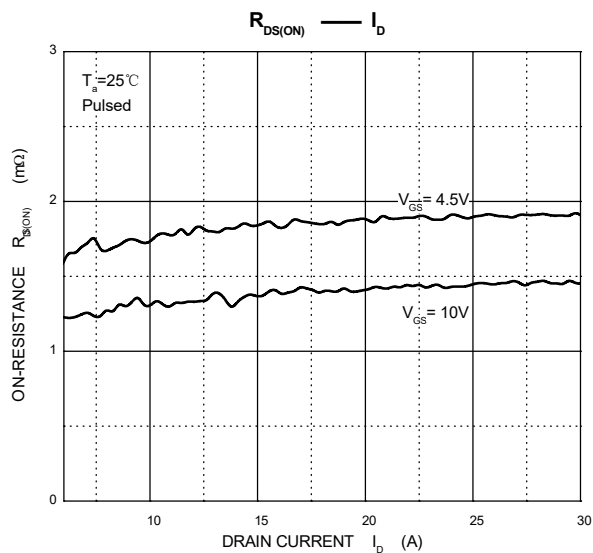
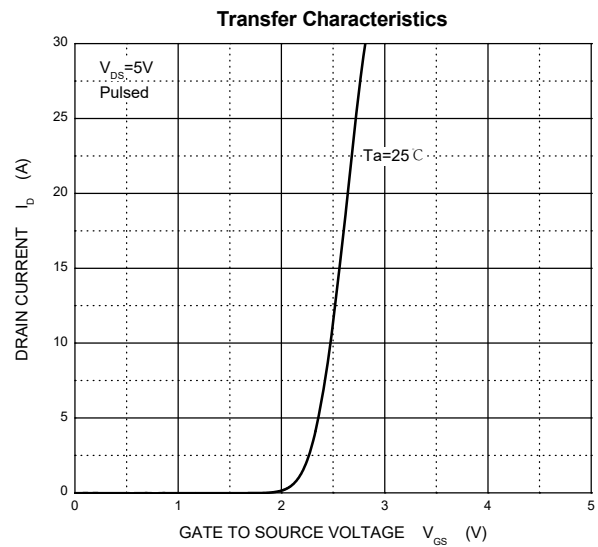
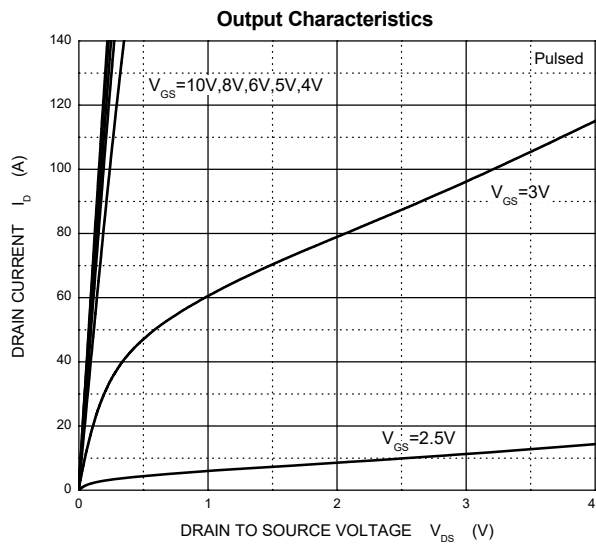
ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Off Characteristics						
Drain-Source breakdown voltage	V _{(BR)DSS}	30			V	V _{GS} =0V, I _D =250uA
Zero gate voltage drain current	I _{DSS}			1	μA	V _{DS} =30V, V _{GS} =0V
Gate-body leakage current	I _{GSS}			±100	nA	V _{DS} =0V, V _{GS} =±20V
Gate-threshold voltage (note 1)	V _{GS(th)}	1.0	1.65	2.5	V	V _{DS} =20V, I _D =250μA
Drain-source on-resistance (note 1)	R _{DS(ON)}		3	3.8	mΩ	V _{GS} =10V, I _D =30A
			5.2	6.4	mΩ	V _{GS} =4.5V, I _D =20A
Dynamic Characteristics						
Input capacitance	C _{iss}		4500		pF	V _{DS} =15V, V _{GS} =0V, f=1MHz
Output capacitance	C _{oss}		800		pF	
Reverse transfer capacitance	C _{rss}		640		pF	
Switching Characteristics						
Turn-on delay time	t _{d(on)}		11		nS	V _{DD} =20V, V _{GS} =10V, I _D =4A R _g =3Ω, R _L =0.75Ω
Turn-on rise time	t _r		80		nS	
Turn-off delay time	t _{d(off)}		39		nS	
Turn-off fall time	t _f		92		nS	

Note:1. Pulse test ; Pulse width ≤300μs, Duty cycle ≤ 2% .

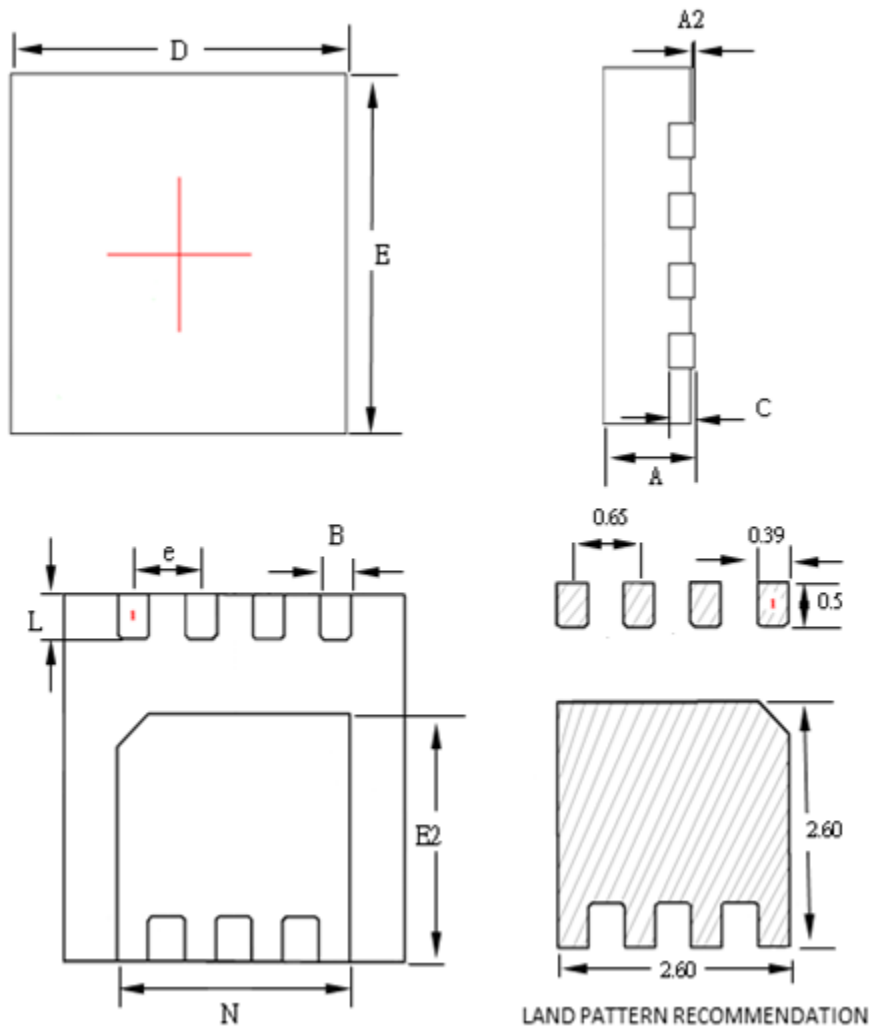
MOSFET (N-CHANNEL)

Typical Characteristics



MOSFET (N-CHANNEL)

PDFN3333



SYMBOLS	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.70	0.75	0.80	0.028	0.030	0.031
A2	0.00	--	0.05	0.000	--	0.002
B	0.24	0.30	0.35	0.009	0.012	0.014
C	0.10	0.15	0.25	0.004	0.006	0.010
D	3.15	3.30	3.40	0.124	0.130	0.134
E	3.15	3.30	3.40	0.124	0.130	0.134
E2	2.15	2.25	2.35	0.085	0.089	0.093
L	0.35	0.40	0.45	0.014	0.016	0.018
N	2.10	2.25	2.35	0.083	0.089	0.093
e	--	0.65	--	--	0.026	--