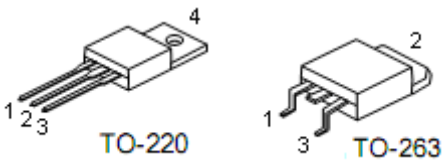
1. Features

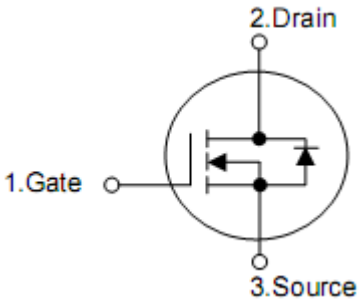
- V_{DSS}=70V/ V_{GSS}=±25V/I_D=80A,,$R_{DS(ON)}$=10.8mΩ(Max.)@V_{GS}=10V
- Avalanche Rated
- Reliable and Rugged
- Advanced trench process technology
- High Density Cell Design For Ultra Low On-Resistance

2. Applications

- Power Management in Inverter System

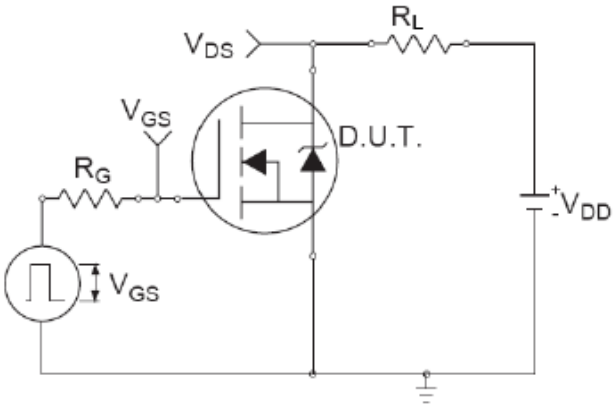
3. Pin configuration

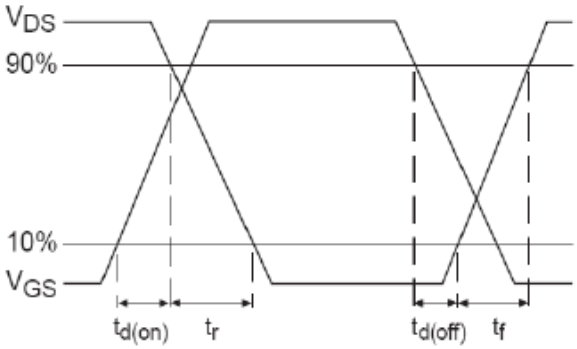




Pin	Function
1	Gate
2	Drain
3	Source
4	Drain

4. Switching Time Test Circuit and Waveforms





5. Absolute maximum ratings

(T_A= 25ºC , unless otherwise noted)

Parameter		Symbol	Rating	Units
Drain-source voltage		V_{DSS}	70	V
Gate-source voltage		V_{GSS}	±25	V
Drain current continuous	T_C=100ºC	I_D	75	A
	T_C=25ºC		80	A
300μs Pulsed drain current tested		I_{DP}	300	A
Diode continuous forward current		I_S	80	A
Operating junction temperature		T_J	175	ºC
Storage temperature Range		T_{STG}	-55~175	ºC

6. Electrical characteristics

(T_A=25°C,unless otherwise noted)

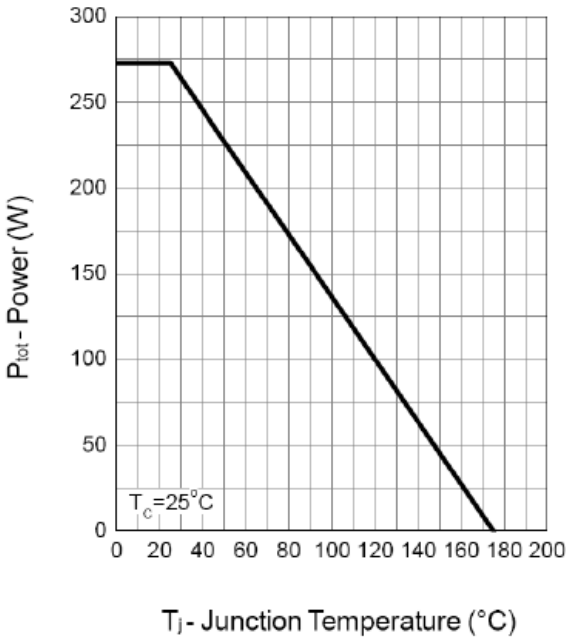
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	BV_{DSS}	V_{GS}=0V,I_D=250μA	70	-	-	V
Zero gate voltage drain current	I_{DSS}	V_{DS}=60V ,V_{GS}=0V	-	-	1	μA
		T_J=85 °C	-	-	30	μA
Gate threshold voltage	$V_{GS(TH)}$	V_{DS}=V_{GS}, I_D=250μA	2	3	4	V
Gate leakage current	I_{GSS}	V_{GS}=±25V,V_{DS}=0V	-	-	±100	nA
Drain-source on-resistance	$R_{DS(ON)}$	V_{DS}=10V,I_D=40A	-	9	10.8	mΩ
Diode Characteristics						
Diode forward voltage	V_{SD}	I_{SD}=20A,V_{GS}=0V	-	0.8	1.1	V
Reverse recovery time	t_{RR}	I_{SD}=40A dI$_{SD}$/dt=100A/μs	-	55	-	ns
Reverse recovery charge	Q_{RR}		-	117	-	nC
Dynamic Characteristics						
Gate resistance	R_G	V_{DS}=0V ,V_{GS}=0V Frequency=1MHz	-	1.5	-	Ω
Input capacitance	C_{ISS}	V_{DS}=30V,V_{GS}=0V, Frequency=1MHz	-	2200	-	pF
Output capacitance	C_{OSS}		-	470	-	pF
Reverse transfer capacitance	C_{RSS}		-	190	-	pF
Turn-on delay time	$t_{D(ON)}$	V_{DD}=15V,I_D=1.0A,R_L=15Ω V_{GEN}=-10V,R_G=6Ω,	-	23	42	ns
Rise time	t_R		-	12	23	ns
Turn-off delay time	$t_{D(OFF)}$		-	77	140	ns
Fall time	t_F		-	69	125	ns
Gate Charge characteristics[2]						
Total gate charge	Q_G	V_{DS}=-15V, I_D=2.5A , V_{GS}=-4.5V	-	52	73	nC
Gate-source charge	Q_{GS}		-	19	-	nC
Gate-drain charge	Q_{GD}		-	27	-	nC

Notes:1:Pulse test;pulse width≤300ns,duty cycle≤2%.

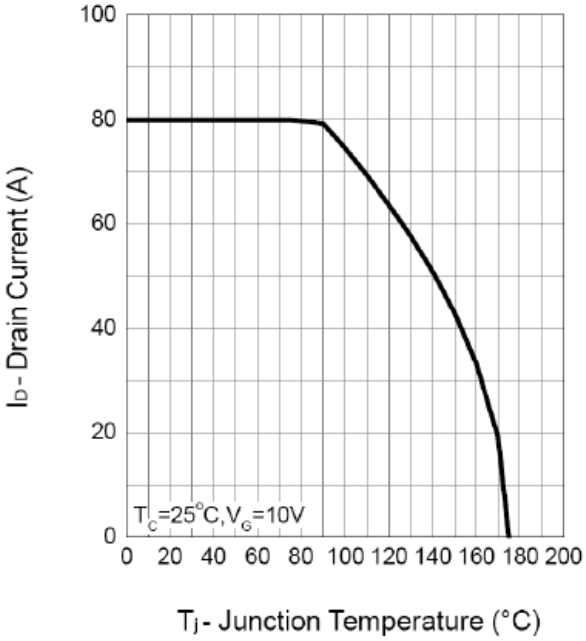
2:Guaranteed by design,not subject to production testing.

7. Test circuits and waveforms

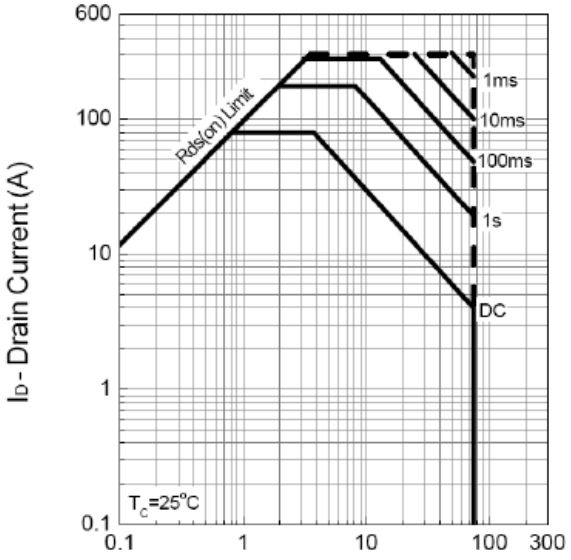
Power Dissipation



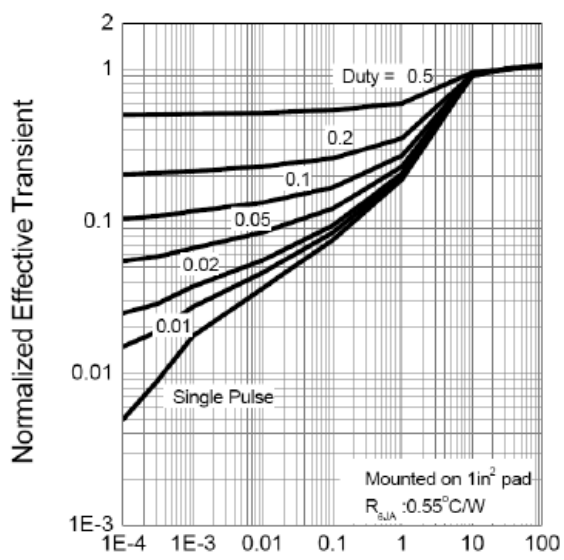
Drain Current



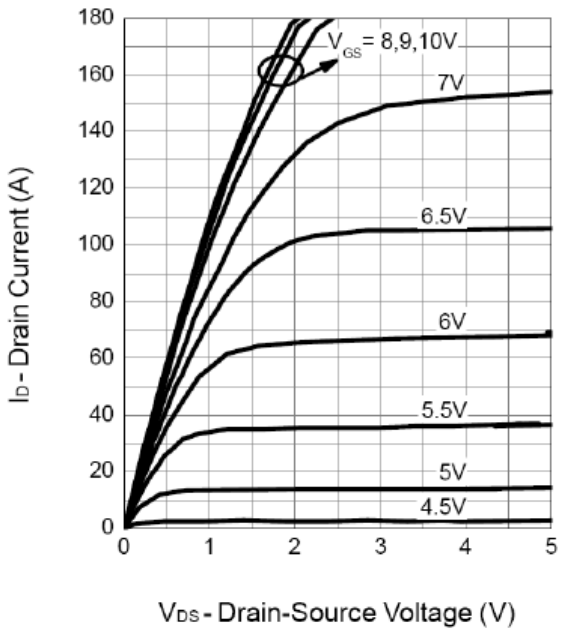
Safe Operation Area



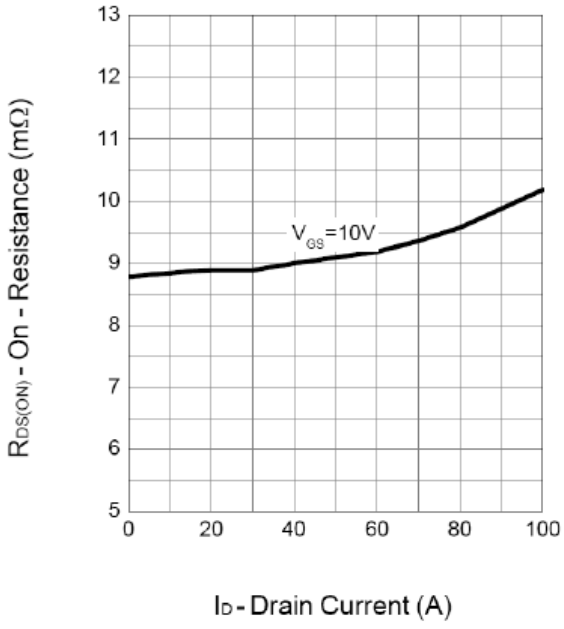
Thermal Transient Impedance



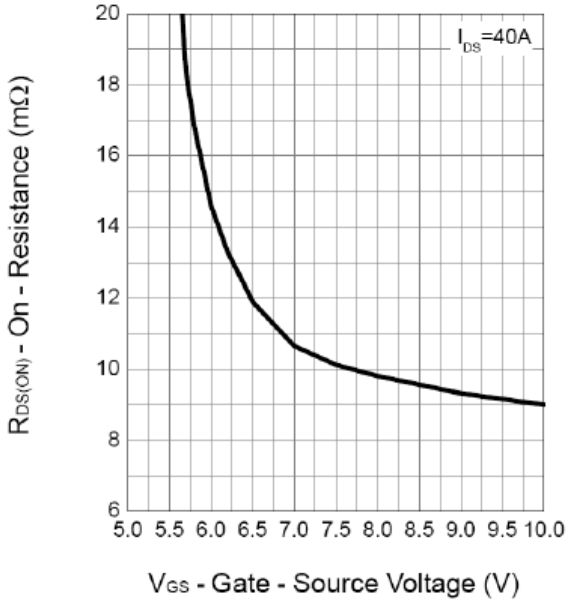
Output Characteristics



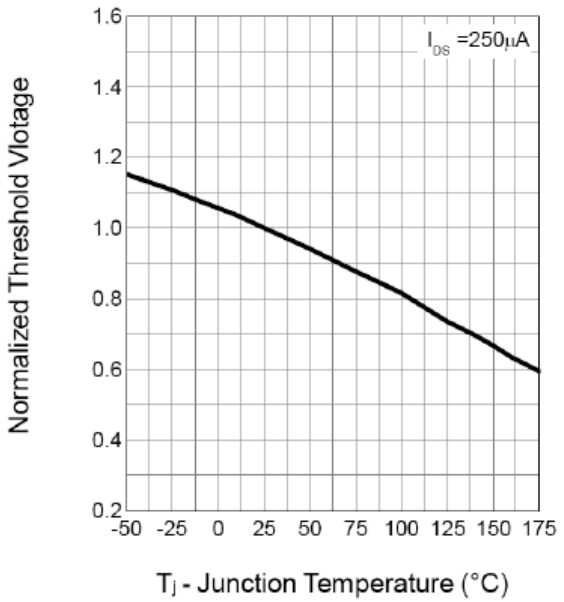
Drain-Source On Resistance



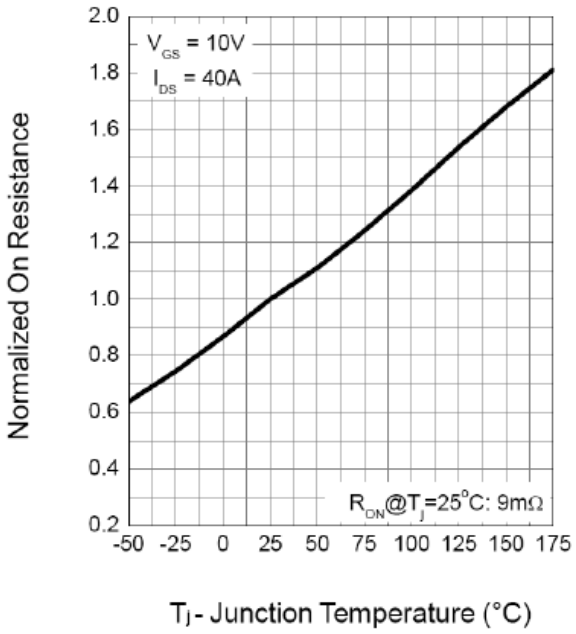
Gate-Source On Resistance



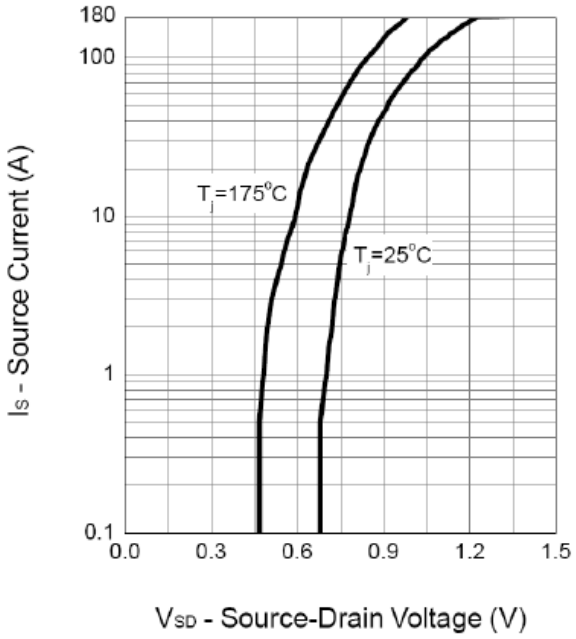
Gate Threshold Voltage



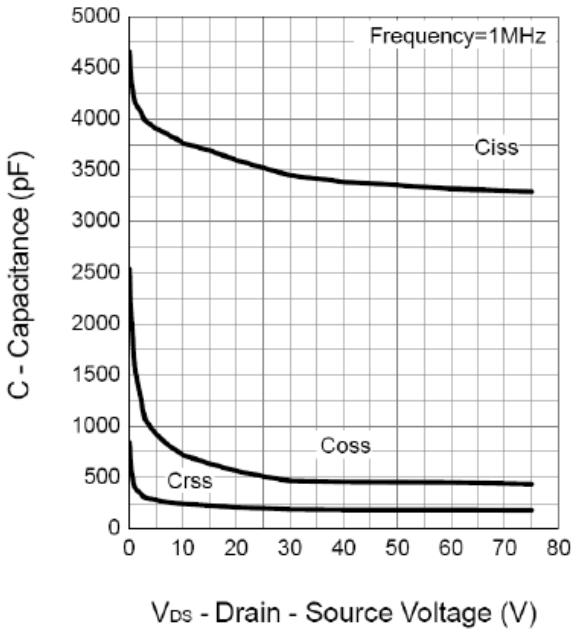
Drain-Source On Resistance



Source-Drain Diode Forward



Capacitance



Gate Charge