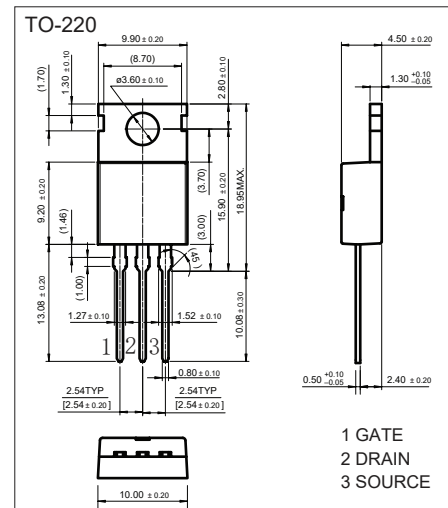
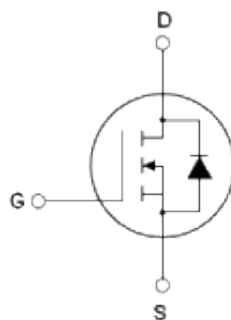


■ Features

- $V_{DS} (V) = 80 V$
- $I_D = 200 A$
- $R_{DS(ON)} (at V_{GS} = 10 V) \leq 3.5 m\Omega$



■ Absolute Maximum Ratings ($T_C = 25^\circ C$ unless otherwise noted)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	80	V
Gate-Source Voltage	V_{GS}	± 20	
Continuous Drain Current (Note 1)	I_D	200	A
Pulsed Drain Current (Note 2)	I_{DM}	800	
Power Dissipation	P_D	270	W
Single Pulse Avalanche Energy (Note 3)	E_{AS}	1590	mJ
Thermal Resistance, Junction- to-Case	$R_{\theta JC}$	0.41	$^\circ C/W$
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55 to 150	

Notes:

1. Surface Mounted on 1 in² pad area, $t \leq 10$ sec
2. Pulse width $\leq 300 \mu s$, duty cycle $\leq 2 \%$
3. Limited by bonding wire

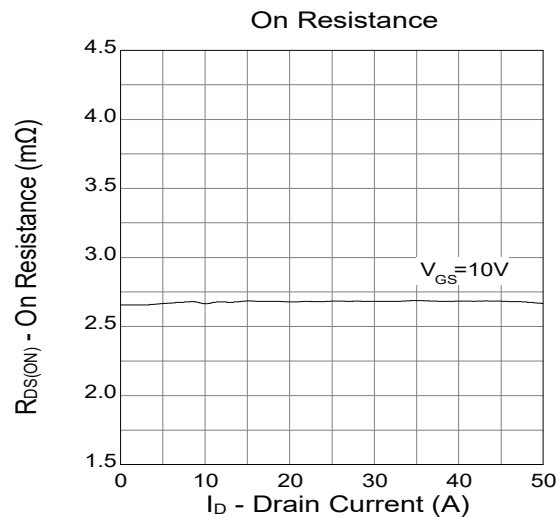
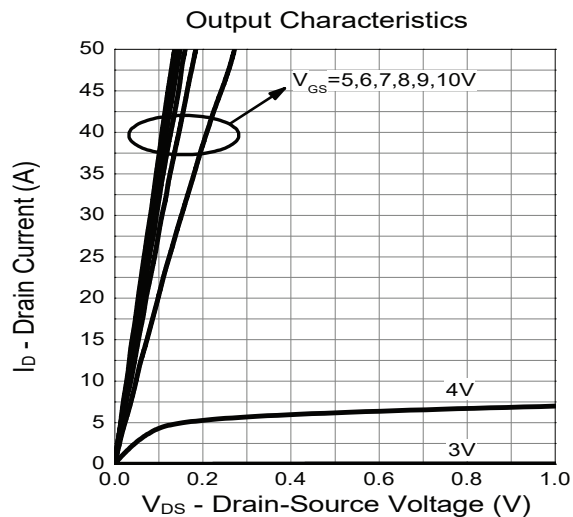
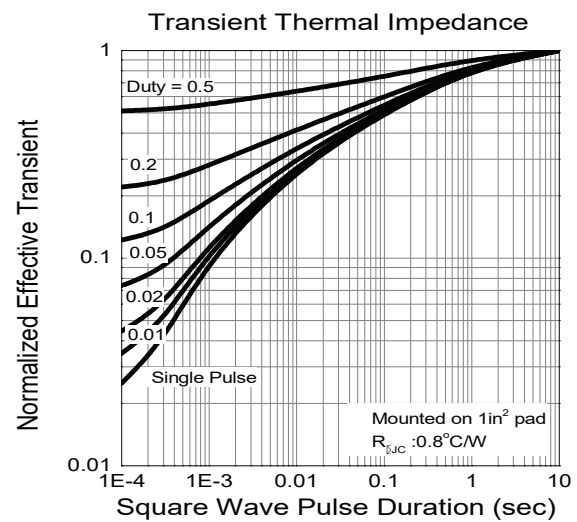
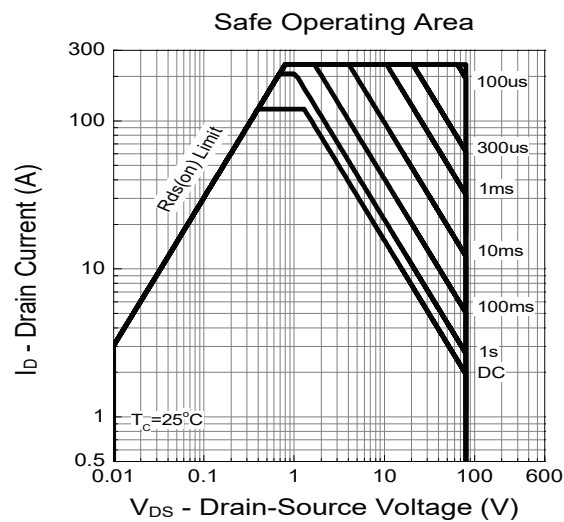
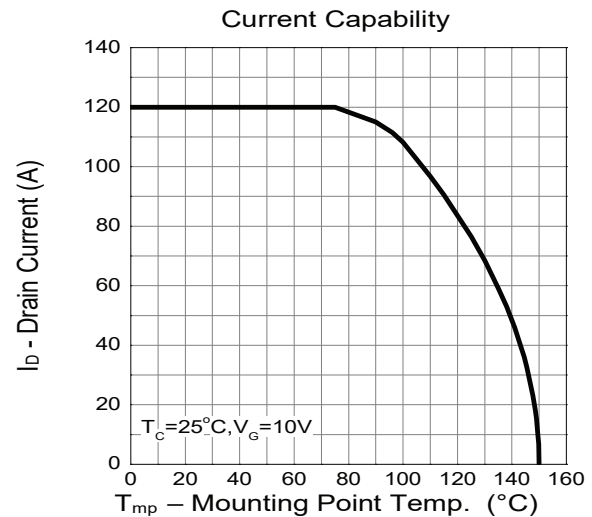
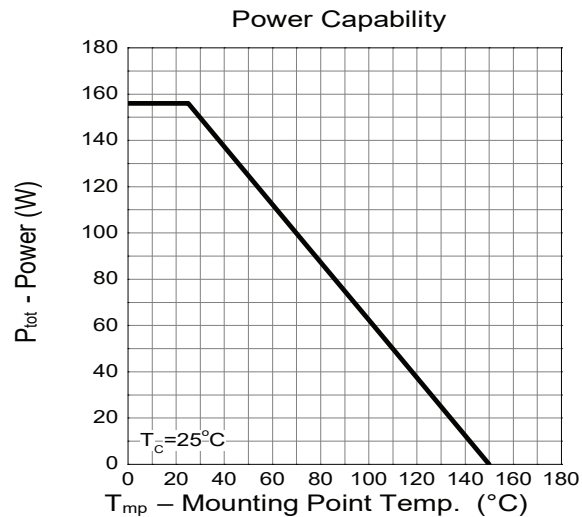
■ Electrical Characteristics (T_J = 25°C unless otherwise specified)

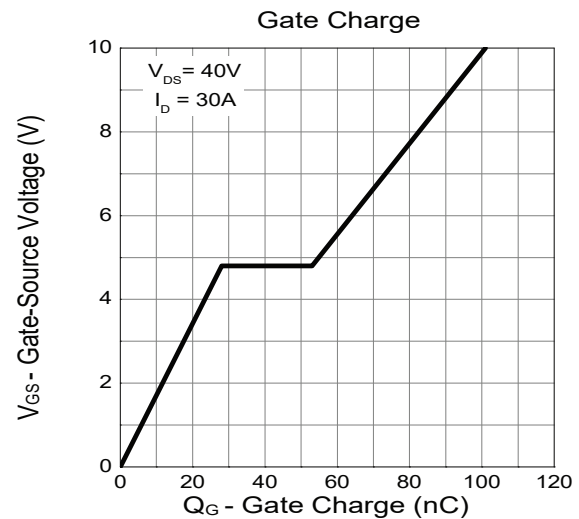
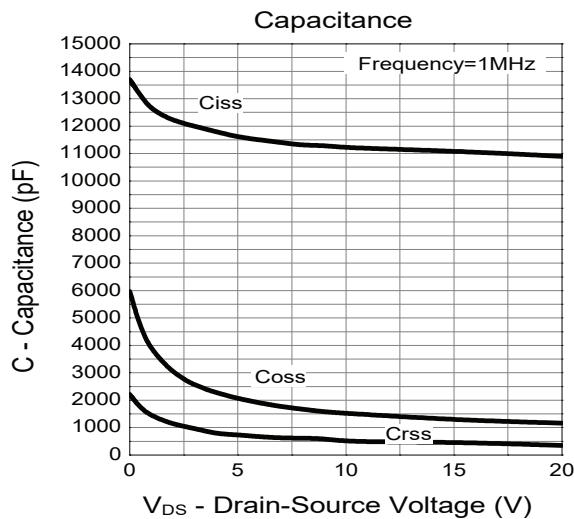
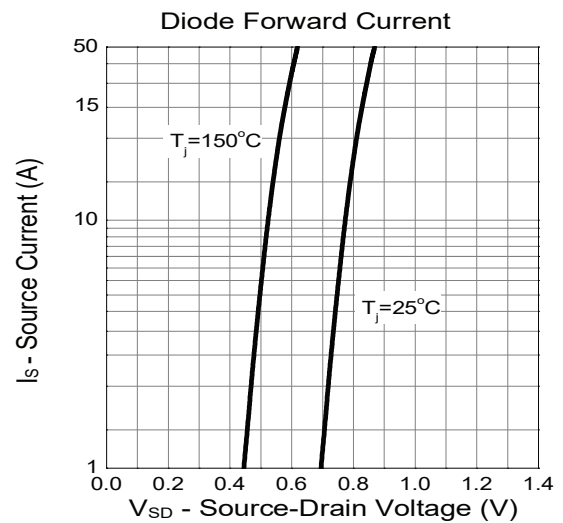
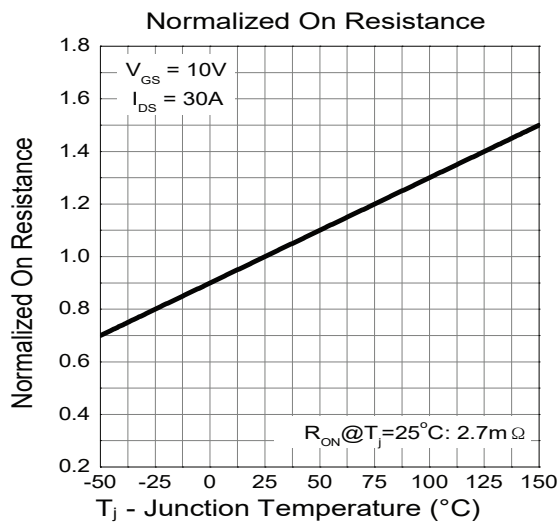
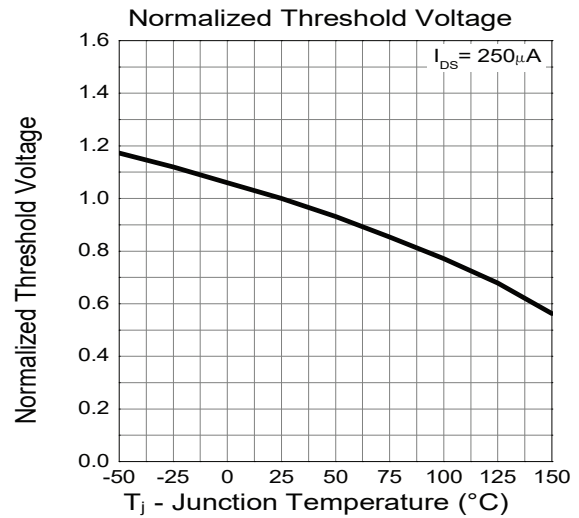
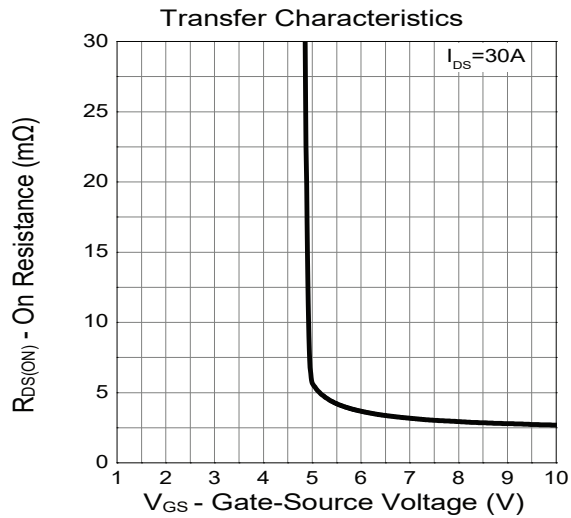
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Static Characteristics						
Drain-Source Breakdown Voltage	BV _{DSS}	I _D = 250 μA, V _{GS} = 0V	80			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = 100 V, V _{GS} = 0 V			1	μA
		V _{DS} = 100 V, V _{GS} = 0 V, T _J = 85°C			30	
Gate to Source Leakage Current	I _{GSS}	V _{DS} = 0 V, V _{GS} = ±20 V			±100	nA
Gate to Source Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250μA	2		4	V
Static Drain-Source On-Resistance (Note 1)	R _{DS(on)}	V _{GS} = 10 V, I _D = 50 A		2.8	3.5	mΩ
Dynamic Characteristics (Note 2)						
Input Capacitance	C _{iss}	V _{GS} = 0 V, V _{DS} = 25 V, f = 1 MHz		13000		pF
Output Capacitance	C _{oss}			940		
Reverse Transfer Capacitance	C _{rss}			800		
Switching Characteristics (Note 2)						
Total Gate Charge	Q _g	V _{GS} = 10V, V _{DS} = 64 V, I _D = 80 A		255		nC
Gate Source Charge	Q _{gs}			75		
Gate Drain Charge	Q _{gd}			78		
Turn-On DelayTime	t _{d(on)}	V _{DS} = 40 V, V _{GEN} = 10 V, R _G = 4.5 Ω, R _L = 1.3 Ω, I _{DS} = 40 A		25		ns
Turn-On Rise Time	t _r			19		
Turn-Off DelayTime	t _{d(off)}			48		
Turn-Off Fall Time	t _f			18		
Drain-Source Diode Characteristics (Note 2)						
Body Diode Reverse Recovery Time	t _{rr}	V _{GS} = 0 V, I _{DS} = 30 A, di/dt = 100 A/μS		63		ns
Body Diode Reverse Recovery Charge	Q _{rr}			80		nC
Maximum Continuous Body-Diode Forward Current	I _S				200	A
Diode Forward Voltage	V _{SD}	V _{GS} = 0 V, I _S = 30 A			1.2	V

Notes:

1. Pulse width ≤ 300 μs, duty cycle ≤ 2 %
2. Guaranteed by design, not subject to production testing.

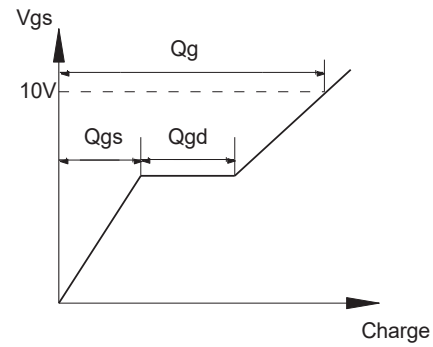
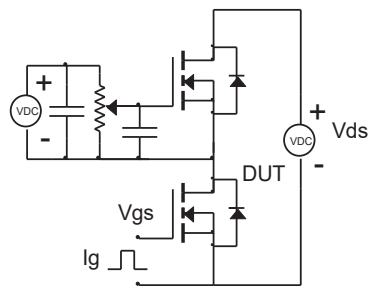
■ Electrical Characteristics (curves)



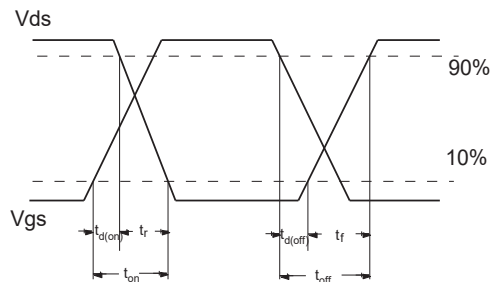
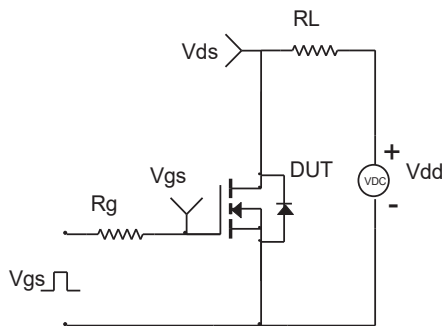


■ Test circuits

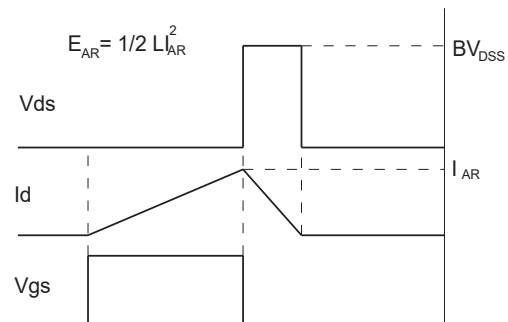
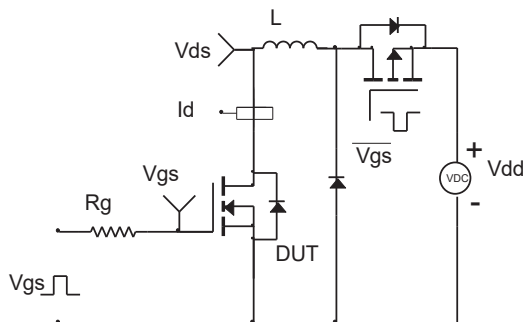
Gate Charge Test Circuit & Waveform



Resistive Switching Test Circuit & Waveforms



Unclamped Inductive Switching (UIS) Test Circuit & Waveforms



Diode Recovery Test Circuit & Waveforms

