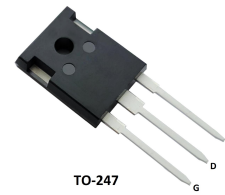


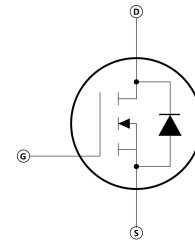
Features

- 100% avalanche tested
- Avalanche ruggedness
- Very low intrinsic capacitances
- High speed switching
- Very low on-resistance



Applications

- UPS
- Switching applications



Electrical ratings

Absolute maximum ratings			
Parameter	Symbol	Value	Unit
Drain-source voltage ($V_{GS} = 0$)	V_{DS}	1700	V
Transient Gate- source voltage	V_{GSM}	± 30	
Continuous Gate- source voltage(DC)	V_{GSS}	± 20	
Drain current (continuous) at $T_C = 25\text{ }^{\circ}\text{C}$	I_D	5	A
Drain current (continuous) at $T_C = 100\text{ }^{\circ}\text{C}$		3	
Drain current (pulsed)	I_{DM}	12	
Avalanche current, repetitive or not-repetitive (pulse width limited by T_J max)	I_{AR}	8	A
Single pulse avalanche energy (starting $T_J = 25\text{ }^{\circ}\text{C}$, $I_D = I_{AR}$, $V_{DD} = 50\text{ V}$)	E_{AS}	800	mJ
Total dissipation at $T_C = 25\text{ }^{\circ}\text{C}$	P_{TOT}	337	W
Operating junction temperature	T_J	-55 to 150	$^{\circ}\text{C}$
Storage temperature	T_{stg}		
Maximum lead temperature for soldering purpose	T_L	300	$^{\circ}\text{C}$

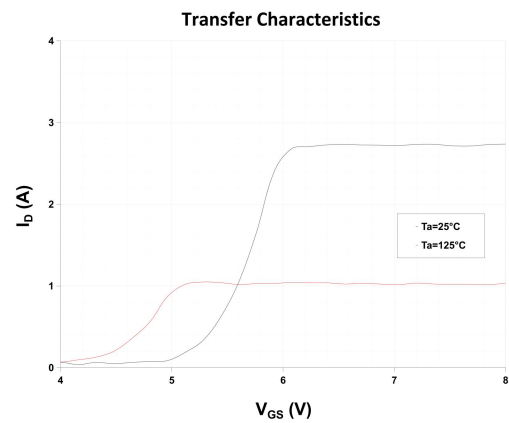
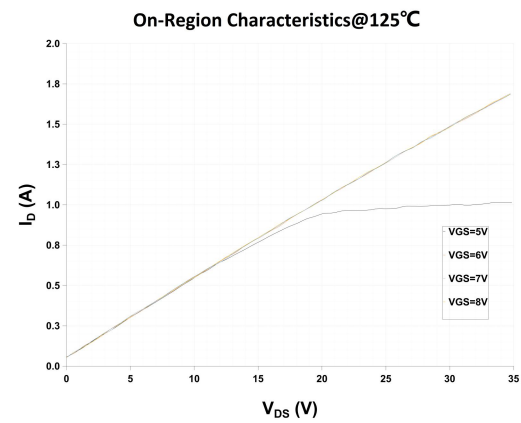
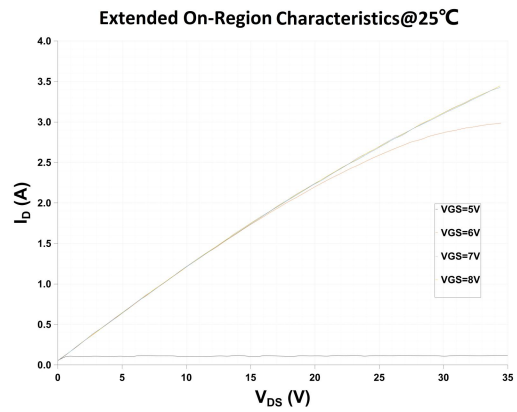
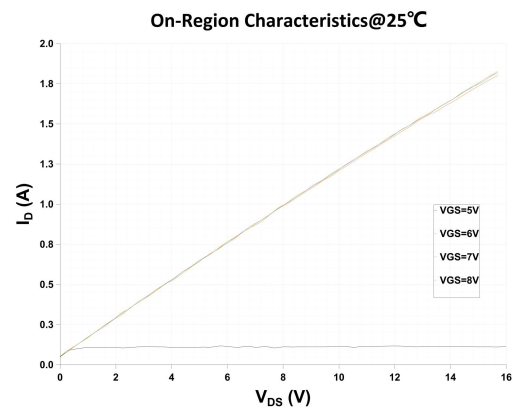
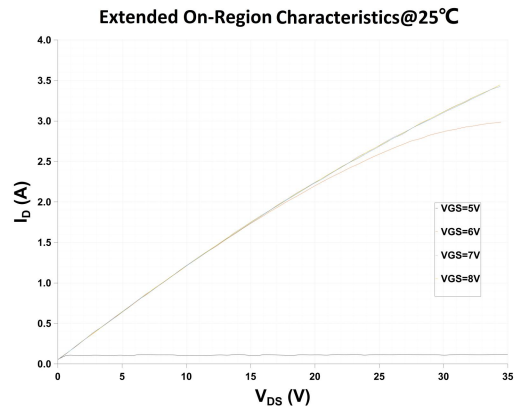
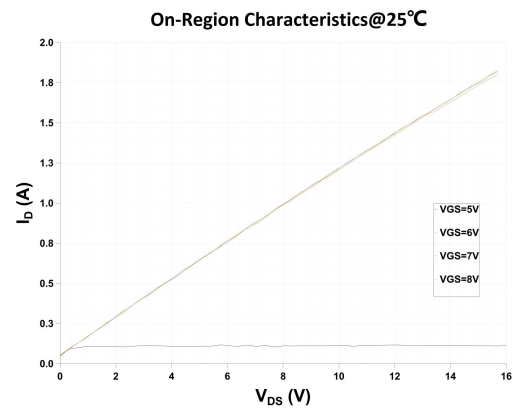
Electrical Characteristics ($T_{vj} = 25^{\circ}\text{C}$ unless otherwise specified)

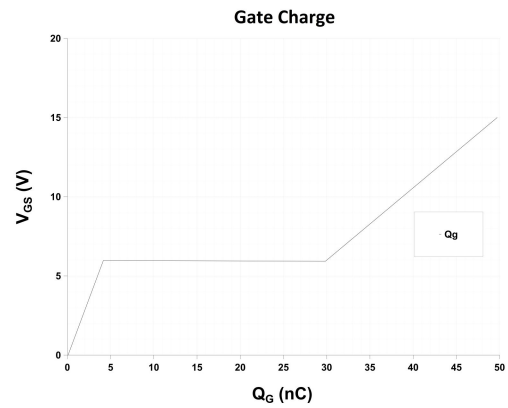
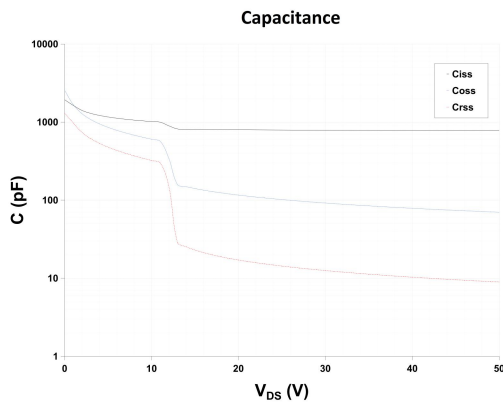
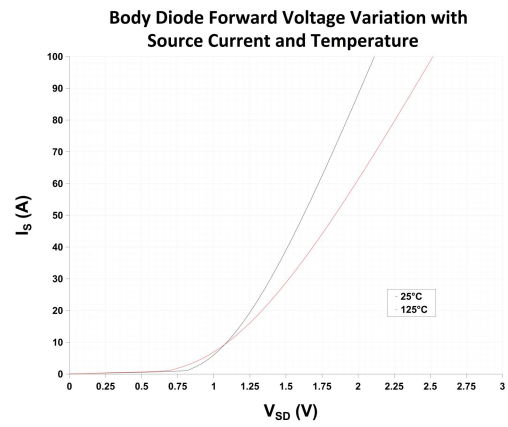
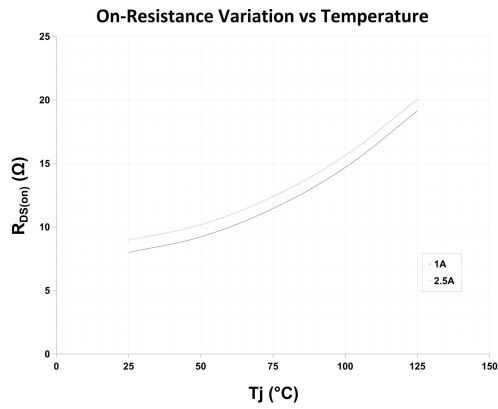
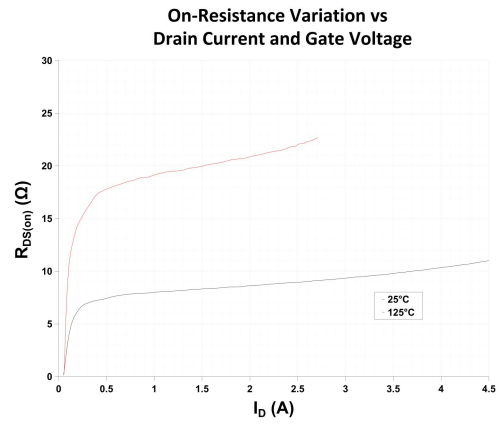
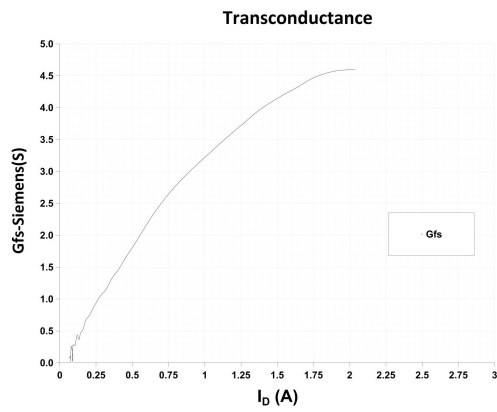
On /off states						
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Drain-source breakdown voltage	$V_{(BR)DSS}$	$I_D = 1\text{ mA}$, $V_{GS} = 0$	1700	-	-	V
Zero gate voltage drain current ($V_{GS} = 0$)	I_{DSS}	$V_{DS} = \text{Max rating}$	-	-	1	μA

Gate-body leakage current ($V_{DS} = 0$)	I_{GSS}	$V_{GS} = \pm 20\text{ V}$	-	-	± 100	nA
Gate threshold voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\text{ }\mu\text{A}$	3	4	5	V
Static drain-source on resistance	$R_{DS(on)}$	$V_{GS} = 10\text{V}, I_D = 1\text{ A}$	-	8.0	9.0	Ω
Transconductance	Gfs	$V_{DS} = 60\text{V}, I_D = 5\text{ A}$	-	6.2	-	S
Dynamic						
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Input capacitance	C_{iss}	$V_{DS}=100\text{V}, f=1\text{MHz}, V_{GS}=0\text{V}$	-	790	-	pF
Output capacitance	C_{oss}		-	101	-	
Reverse transfer capacitance	C_{rss}		-	14	-	
Total gate charge	Q_g	$V_{DD}=1360\text{V}, I_D=2.5\text{ A}$ $V_{GS}=10\text{V}$	-	49.8	-	nC
Gate-source charge	Q_{gs}		-	4	-	
Gate-drain charge	Q_{gd}		-	25.8	-	
Switching times						
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Turn-on delay time	$t_{d(on)}$	$V_{DD} = 1360\text{V}, I_D = 2.5\text{ A}, R_G = 25\text{ }\Omega, V_{GS} = 10\text{ V}$	-	49.3	-	ns
Rise time	t_r		-	24.3	-	
Turn-off-delay time	$t_{d(off)}$		-	79.1	-	
Fall time	t_f		-	24.3	-	
Source drain diode						
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Source-drain current	I_{SD}		-	5	-	A
Source-drain current (pulsed)	I_{SDM}		-	11	-	
Forward on voltage	V_{SD}	$I_{SD}= 5\text{ A}, V_{GS}= 0$	-	0.9	-	V
Reverse recovery time	t_{rr}	$I_{SD}= 5\text{ A}, -di/dt= 100\text{ A}/\mu\text{s}$	-	2.38	-	μs
Reverse recovery charge	Q_{rr}	$V_{DD}= 60\text{ V}$	-	7.6	-	μC

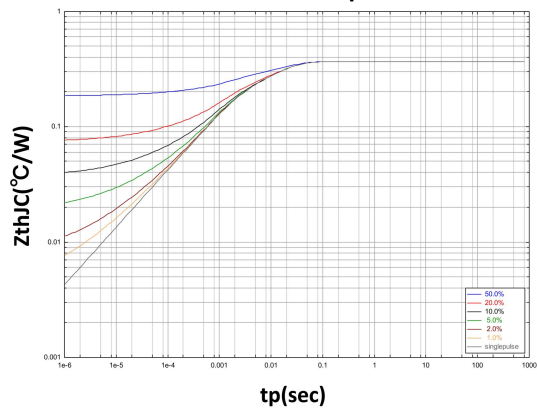
Thermal data			
Parameter	Symbol	Value	Unit
Thermal resistance junction-case max	$R_{thj-case}$	0.37	$^{\circ}\text{C}/\text{W}$
Thermal resistance junction-ambient max	$R_{thj-amb}$	30.64	

Electrical characteristics

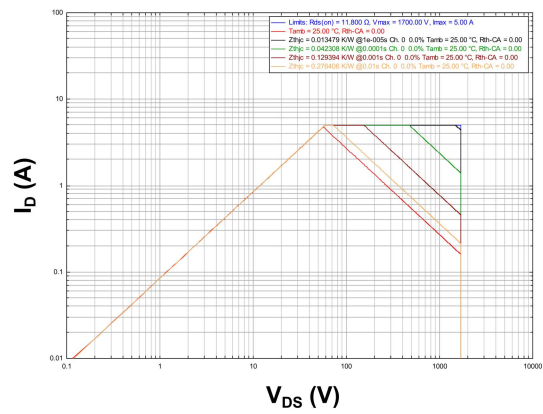




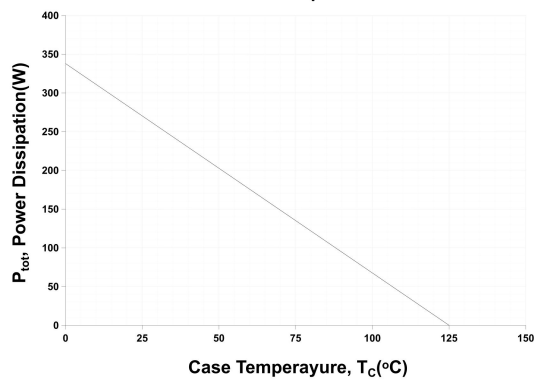
Transient Thermal Response Curve



SOA



Power Dissipation



Package outline dimension

