

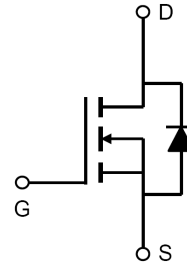
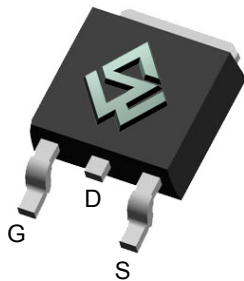
**100V Single N-Channel Enhancement-Mode MOSFET****General Description**

- 100V/60A
- Fully characterized Avalanche voltage and current.
- EAS 100% Test

Product Summary

- BV_{DSS} 100V
- $R_{DS(on)}$ @VGS = 10V < 115mΩ
- $R_{DS(on)}$ @VGS = 4.5V < 130mΩ

TO-252 D-PAK

**Absolute Maximum Ratings** ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Maximum	Units
Drain-Source Voltage	V_{DS}	100	V
Gate-Source Voltage	V_{GS}	± 20	V
Drain Current ($T_C=25^\circ\text{C}$)	I_D	15	A
Drain Current ($T_C=100^\circ\text{C}$)		11	A
Pulsed Drain Current ^a	I_{DM}	20	A
Single Pulse Avalanche energy ^b	E_{AS}	6	mJ
Power Dissipation ($T_C=100^\circ\text{C}$)	P_D	30	W
Junction and Storage Temperature Range	T_J, T_{STG}	-55 ~ +150	$^\circ\text{C}$

Thermal Characteristics

Parameter	Symbol	Maximum	Units
Thermal Resistance, Junction-to-Case ^c	$R_{\theta JC}$	1.1	$^\circ\text{C}/\text{W}$
Thermal Resistance Junction-Ambient	$R_{\theta JA}$	50	$^\circ\text{C}/\text{W}$



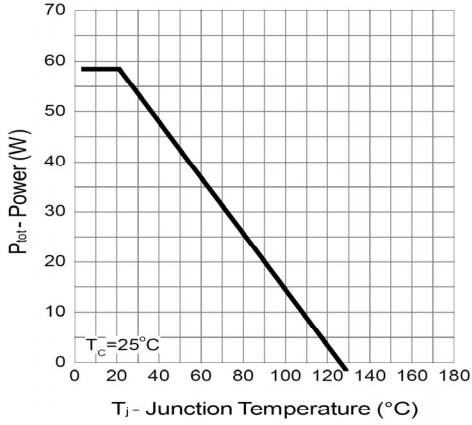
Electrical Characteristics (T _A = 25°C unless otherwise noted)						
Symbol	Parameter	Conditions	Min	Typ	Max	Units
Off Characteristics						
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} = 0V , I _D = 250uA	100			V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = 100V , V _{GS} = 0V			1	uA
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ±20V, V _{DS} = 0V			±100	nA
On Characteristics						
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS} , I _D = 250uA	1.5	2	2.5	V
R _{DS(ON)}	Drain-Source On-State Resistance	V _{GS} = 10V , I _D = 15A			115	mΩ
		V _{GS} = 4.5V , I _D = 8A			130	
Drain-Source Diode Characteristics						
V _{SD}	Diode Forward Voltage	V _{GS} = 0V , I _S = 5A		0.8	1.2	V
I _S	Maximum Body-Diode Continuous Current				10	A
Dynamic Characteristics						
C _{iss}	Input Capacitance	V _{DS} = 30V , V _{GS} = 0V f = 1.0MHz		950		pF
C _{oss}	Output Capacitance			82		pF
C _{rss}	Reverse Transfer Capacitance			50		pF
Switching Characteristics						
Q _g	Total Gate Charge	V _{DS} = 50V , I _D = 5A V _{GS} = 10V		24		nC
Q _{gs}	Gate-Source Charge			6.5		nC
Q _{gd}	Gate-Drain Charge			5.5		nC
t _{D(ON)}	Turn-On Delay Time	V _{DD} = 30V , I _D = 1A V _{GS} = 10 V R _{GEN} = 6.0ohm		13.5		ns
t _r	Turn-On Rise Time			11		ns
t _{D(OFF)}	Turn-Off Delay Time			31.5		ns
t _f	Turn-Off Fall Time			17		ns

- a. Repetitive rating, Pulse width limited by junction temperature T_{J(MAX)}=150 °C. Ratings are based on low frequency and duty cycles to keep initial T_J=25 °C
- b. EAS Condition: T_J=25 °C, V_{DD}=15V, V_G=10V, L=0.5mH, R_g=25Ω
- c. The value of R_{θJC} is measured with the device mounted on 1in² FR-4 board with 2oz. Copper, in a still air environment with T_A = 25°C. The value in any given application depends on the user's specific board design.

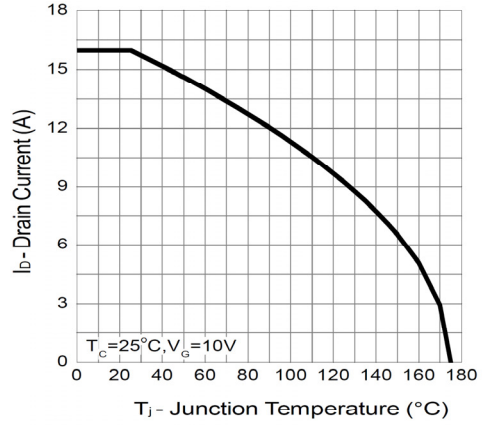


Typical Characteristics

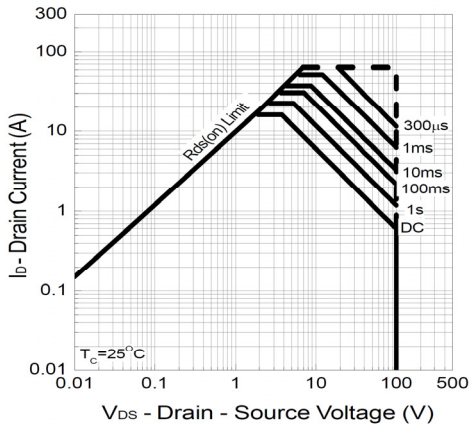
Power Dissipation



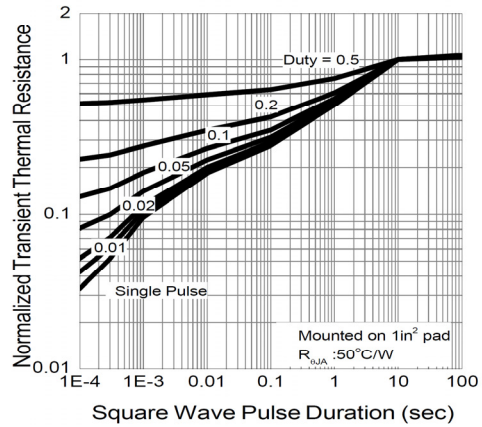
Drain Current



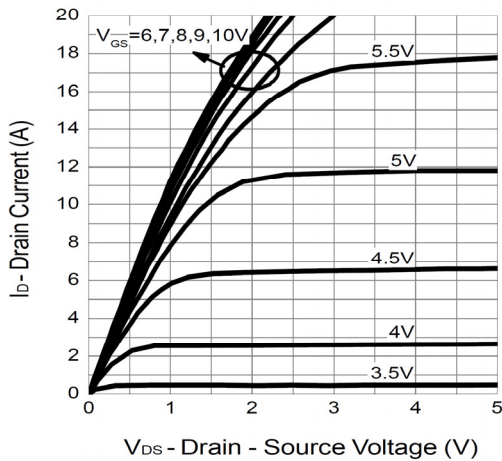
Safe Operation Area



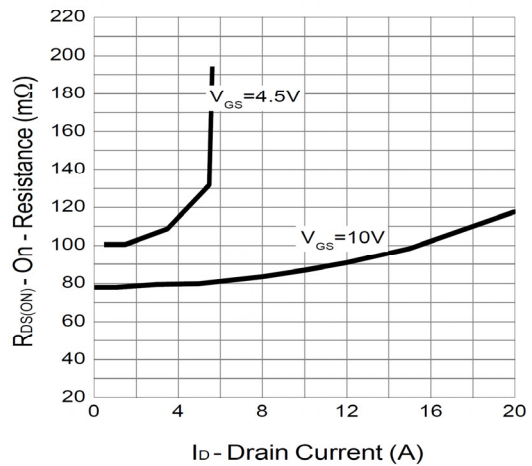
Thermal Transient Impedance



Output Characteristics



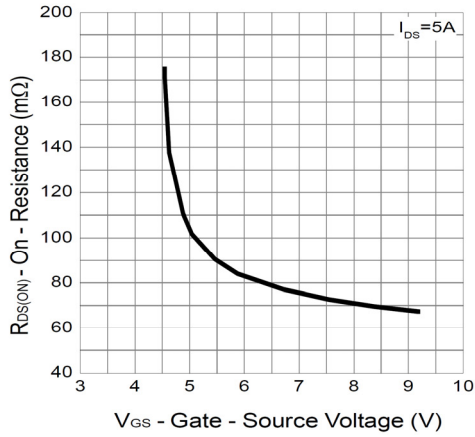
Drain-Source On Resistance



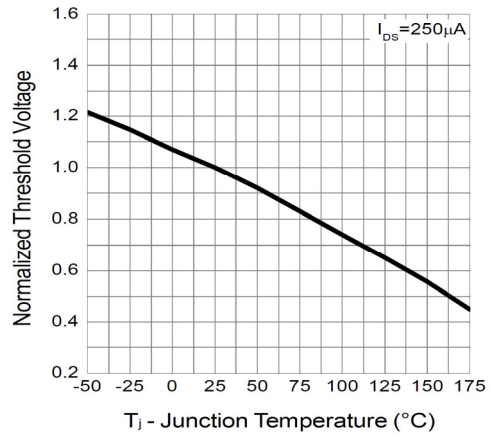


Typical Characteristics

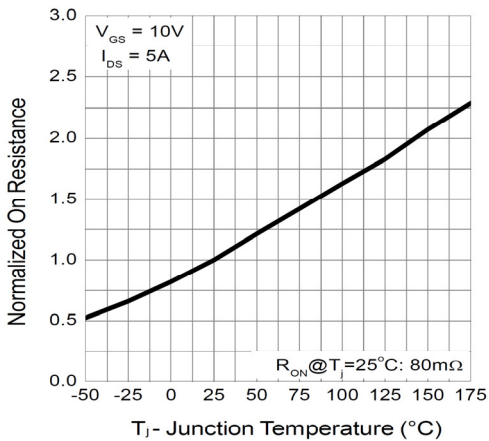
Gate-Source On Resistance



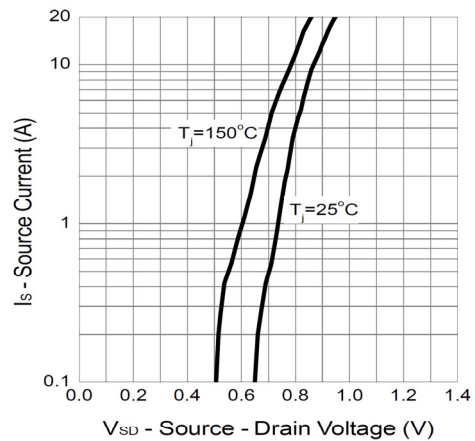
Gate Threshold Voltage



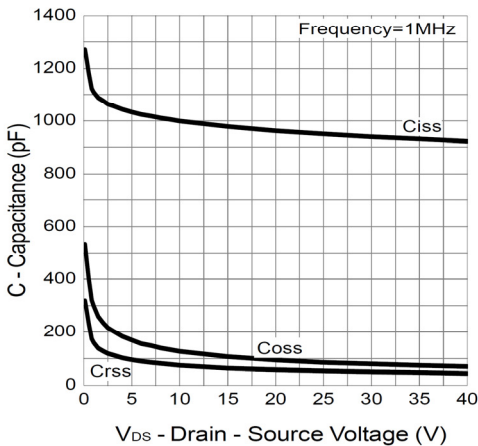
Drain-Source On Resistance



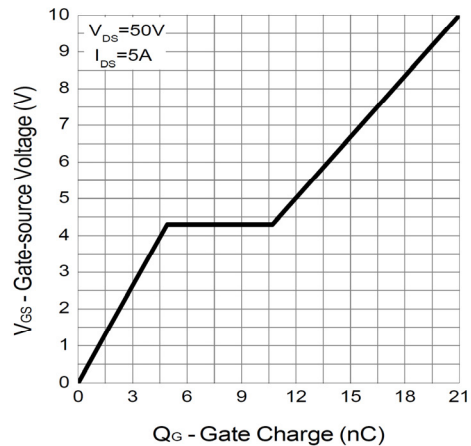
Source-Drain Diode Forward



Capacitance

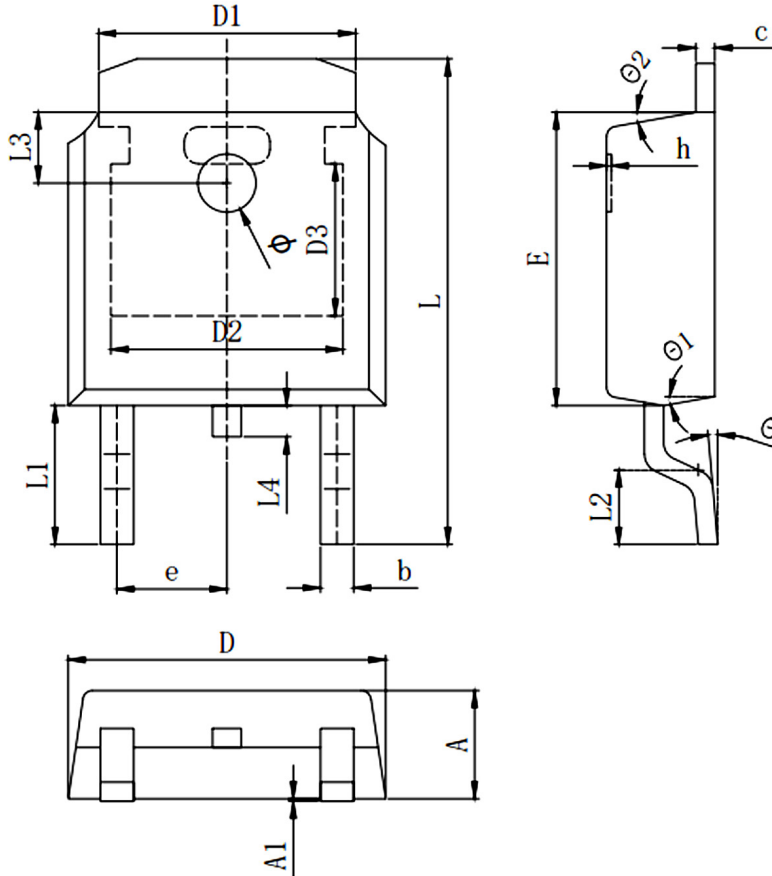


Gate Charge





TO-252 D-PAK Package



Symbols	Millimeters		
	MIN.	Mom.	MAX.
A	2.200	2.300	2.400
A1	0.000		0.127
b	0.640	0.690	0.740
c(电镀后)	0.460	0.520	0.580
D	6.500	6.600	6.700
D1	5.334 REF		
D2	4.826 REF		
D3	3.166REF		
E	6.000	6.100	6.200
e	2.286 TYP		
h	0.000	0.100	0.200
L	9.900	10.100	10.300
L1	2.888 REF		
L2	1.400	1.550	1.700
L3	1.600 REF		
L4	0.600	0.800	1.000
Φ	1.100	1.200	1.300
θ	0°		8°
θ_1	9° TYP		
θ_2	9° TYP		

单击下面可查看定价，库存，交付和生命周期等信息

[>>SiliconWisdom\(矽睿半导体\)](#)