Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Characteristic		Symbol	Value	Units
Drain-Source Voltage		V_{DSS}	-50	V
Drain-Gate Voltage (Note 5)		V_{DGR}	-50	V
Gate-Source Voltage	Continuous	V_{GSS}	±20	V
Drain Current (Note 6)	Continuous	I_D	-130	mA

Thermal Characteristics (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Value	Units
Total Power Dissipation	P_D	150	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	833	°C/W
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +150	°C

Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
OFF CHARACTERISTICS (Note 7)						
Drain-Source Breakdown Voltage	BV_{DSS}	-50	-75	—	V	V_{GS} = 0V, I_D = -250µA
Zero Gate Voltage Drain Current	I_{DSS}	—	—	-1	µA	V_{DS} = -50V, V_{GS} = 0V, T_J = +25°C
		—	—	-2	µA	V_{DS} = -50V, V_{GS} = 0V, T_J = +125°C
		—	—	-100	nA	V_{DS} = -25V, V_{GS} = 0V, T_J = +25°C
Gate-Body Leakage	I_{GSS}	—	—	±50	nA	V_{GS} = ±20V, V_{DS} = 0V
ON CHARACTERISTICS (Note 7)						
Gate Threshold Voltage	$V_{GS(th)}$	-0.8	-1.6	-2.0	V	V_{DS} = V_{GS}, I_D = -1mA
Static Drain-Source On-Resistance	$R_{DS\ (ON)}$	—	2	10	Ω	V_{GS} = -5V, I_D = -0.100A
Forward Transconductance	g_{FS}	0.05	—	—	S	V_{DS} = -25V, I_D = -0.1A
DYNAMIC CHARACTERISTICS						
Input Capacitance	C_{iss}	—	—	45	pF	V_{DS} = -25V, V_{GS} = 0V, f = 1.0MHz
Output Capacitance	C_{oss}	—	—	25	pF	
Reverse Transfer Capacitance	C_{rss}	—	—	12	pF	
SWITCHING CHARACTERISTICS						
Turn-On Delay Time	$t_{D(ON)}$	—	10	—	ns	V_{DD} = -30V, I_D = -0.27A,
Turn-Off Delay Time	$t_{D(OFF)}$	—	18	—	ns	R_{GEN} = 50Ω, V_{GS} = -10V

Notes:
5. $R_{GS} \leq 20K\Omega$.
6. Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch; pad layout as shown in Diodes Incorporated's package outline PDFs, which can be found on our website at http://www.diodes.com/package-outlines.html.
7. Short duration pulse test used to minimize self-heating effect.

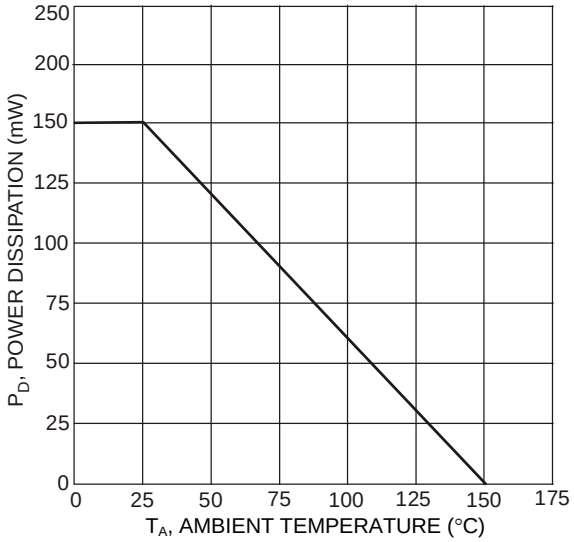


Fig. 1 Max Power Dissipation vs. Ambient Temperature

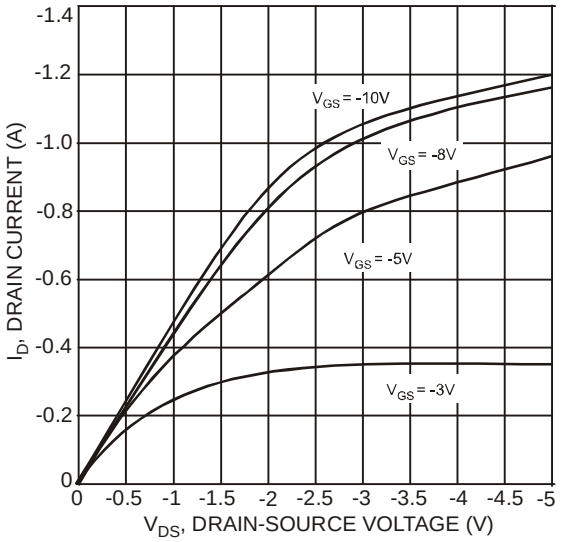


Fig. 2 Typical Output Characteristics

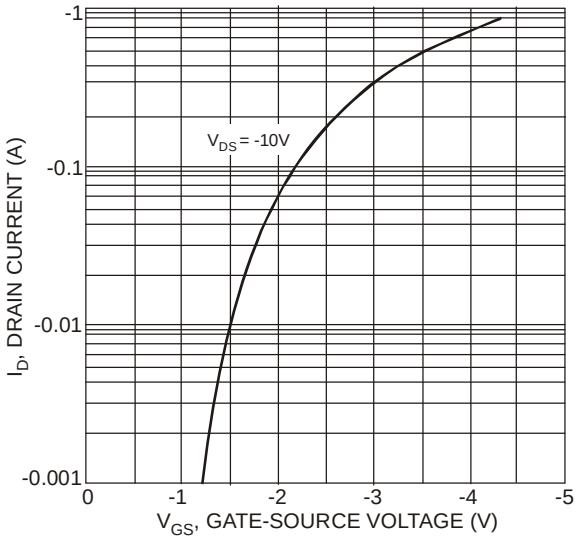


Fig. 3 Typical Transfer Characteristics

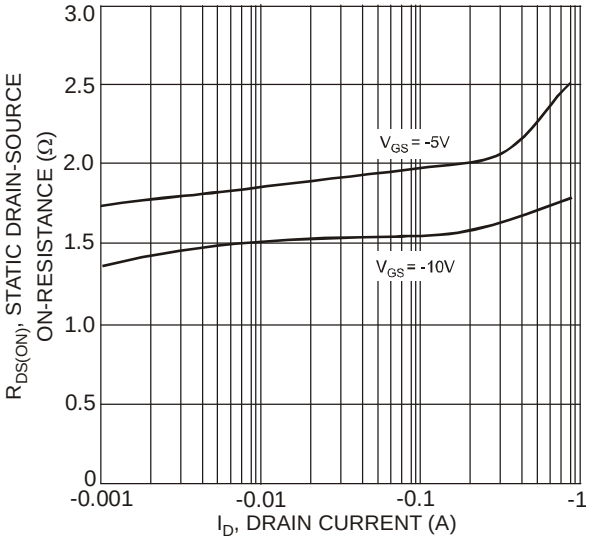


Fig. 4 Static Drain-Source On-Resistance vs. Drain Current

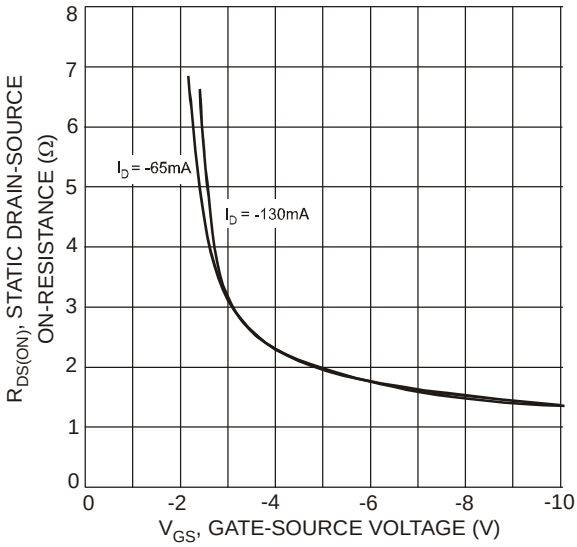


Fig. 5 Static Drain-Source On-Resistance vs. Gate-Source Voltage

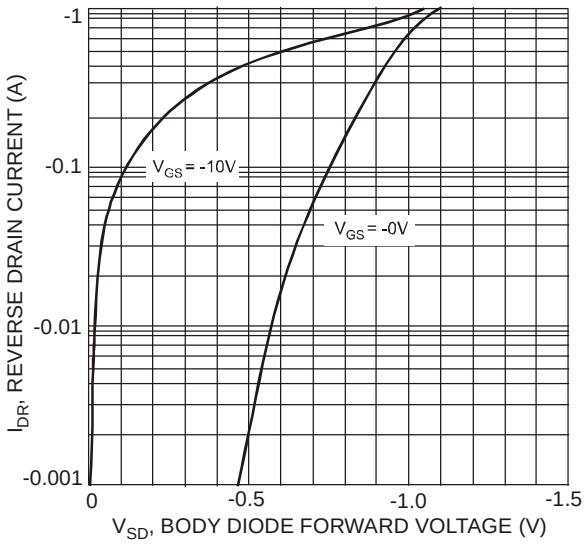
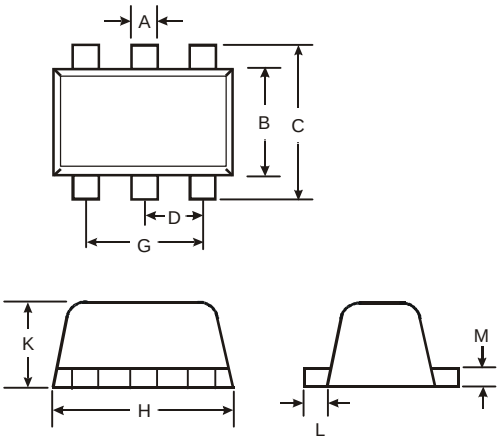


Fig. 6 Reverse Drain Current vs. Body Diode Forward Voltage

Package Outline Dimensions

Please see http://www.diodes.com/package-outlines.html for the latest version.

SOT563

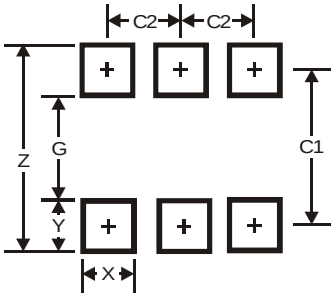


SOT563			
Dim	**Min**	**Max**	**Typ**
A	0.15	0.30	0.20
B	1.10	1.25	1.20
C	1.55	1.70	1.60
D	-	-	0.50
G	0.90	1.10	1.00
H	1.50	1.70	1.60
K	0.55	0.60	0.60
L	0.10	0.30	0.20
M	0.10	0.18	0.11
All Dimensions in mm			

Suggested Pad Layout

Please see http://www.diodes.com/package-outlines.html for the latest version.

SOT563



Dimensions	Value (in mm)
Z	2.2
G	1.2
X	0.375
Y	0.5
C1	1.7
C2	0.5

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