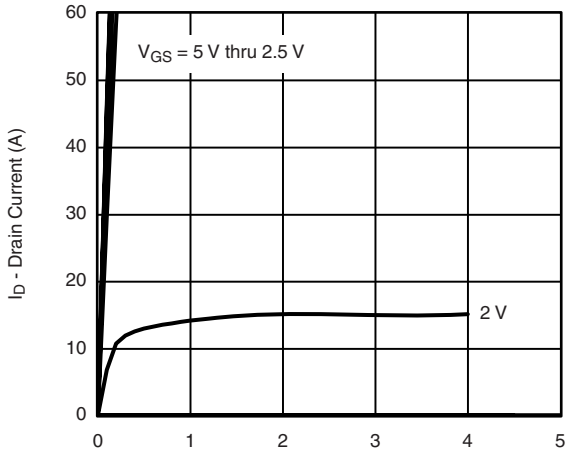
SPECIFICATIONS T_J = 25 °C, unless otherwise noted						
Parameter	**Symbol**	**Test Conditions**	**Min.**	**Typ.**	**Max.**	**Unit**
Static						
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS} = V_{GS}, I_D = 250 µA	0.6		1.8	V
Gate-Body Leakage	I_{GSS}	V_{DS} = 0 V, V_{GS} = ± 12 V			± 100	nA
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} = 20 V, V_{GS} = 0 V			1	µA
		V_{DS} = 20 V, V_{GS} = 0 V, T_J = 55 °C			5	
On-State Drain Current[a]	$I_{D(on)}$	$V_{DS} \geq$ 5 V, V_{GS} = 4.5 V	30			A
Drain-Source On-State Resistance[a]	$R_{DS(on)}$	V_{GS} = 4.5 V, I_D = 25 A		0.0022	0.0027	Ω
		V_{GS} = 2.5 V, I_D = 22 A		0.0034	0.0042	
Forward Transconductance[a]	g_{fs}	V_{DS} = 10 V, I_D = 25 A		150		S
Diode Forward Voltage[a]	V_{SD}	I_S = 2.9 A, V_{GS} = 0 V		0.72	1.1	V
Dynamic[b]						
Input Capacitance	C_{iss}	V_{DS} = 10 V, V_{GS} = 0 V, f = 1 MHz		8500		pF
Output Capacitance	C_{oss}			1250		
Reverse Transfer Capacitance	C_{rss}			650		
Total Gate Charge	Q_g	V_{DS} = 10 V, V_{GS} = 4.5 V, I_D = 25 A		55		nC
Gate-Source Charge	Q_{gs}			16		
Gate-Drain Charge	Q_{gd}			10		
Gate Resistance	R_g		0.8	1.3	2.0	Ω
Turn-On Delay Time	$t_{d(on)}$	V_{DD} = 10 V, R_L = 10 Ω $I_D \cong$ 1 A, V_{GEN} = 4.5 V, R_g = 6 Ω		85	130	ns
Rise Time	t_r			65	100	
Turn-Off Delay Time	$t_{d(off)}$			140	210	
Fall Time	t_f			50	80	
Source-Drain Reverse Recovery Time	t_{rr}	I_F = 2.9 A, dI/dt = 100 A/µs		50	80	

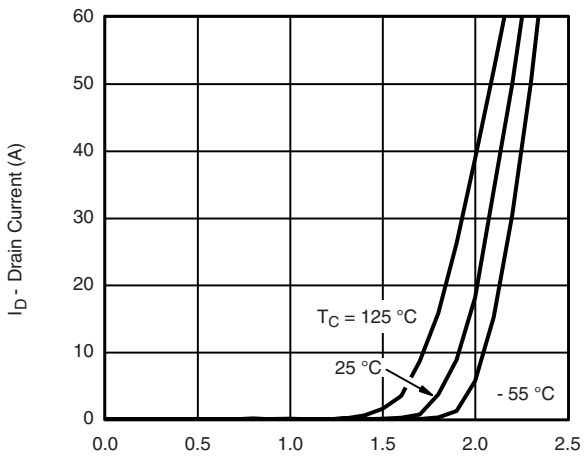
Notes:
a. Pulse test; pulse width ≤ 300 µs, duty cycle ≤ 2 %.
b. Guaranteed by design, not subject to production testing.

Stresses beyond those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated in the operational sections of the specifications is not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

TYPICAL CHARACTERISTICS 25 °C, unless otherwise noted

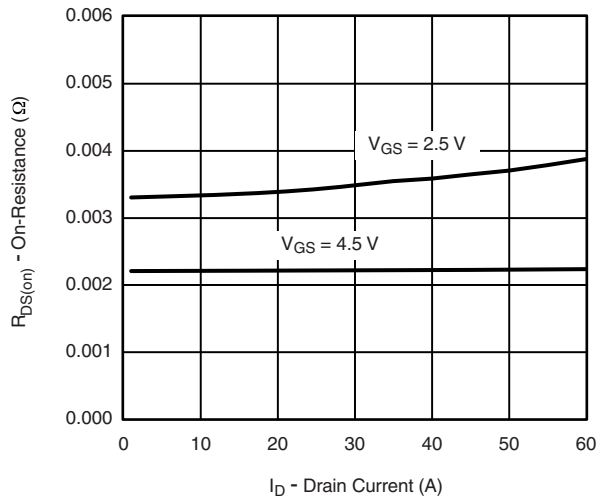


Output Characteristics

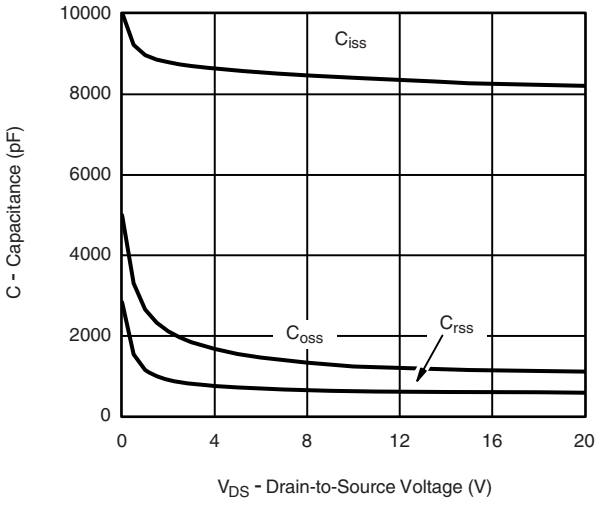


Transfer Characteristics

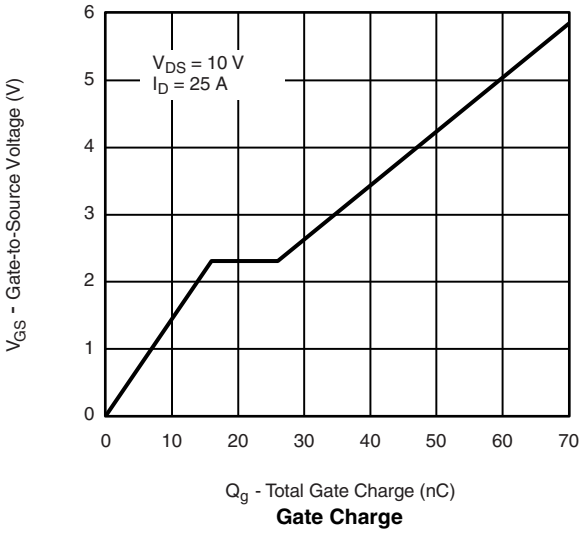
TYPICAL CHARACTERISTICS 25 °C, unless otherwise noted



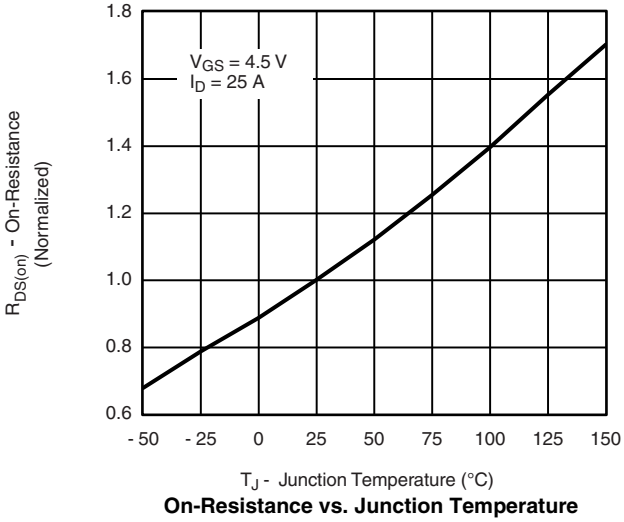
On-Resistance vs. Drain Current



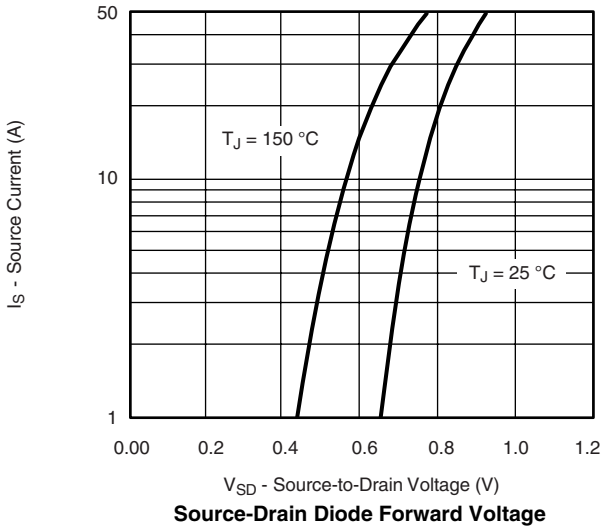
Capacitance



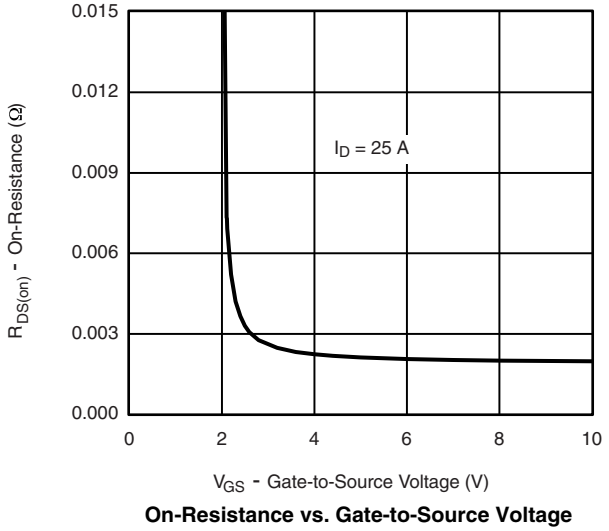
Gate Charge



On-Resistance vs. Junction Temperature

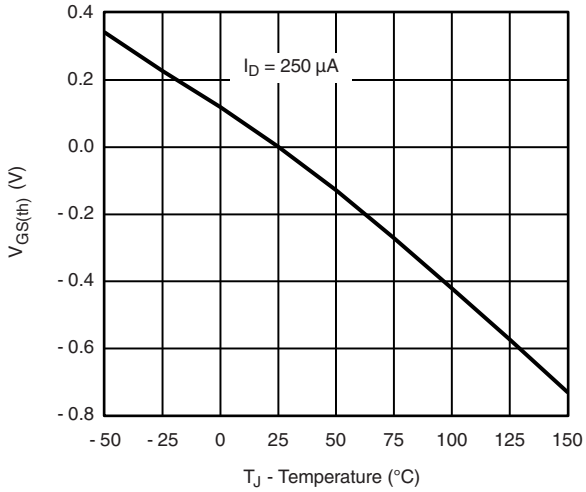


Source-Drain Diode Forward Voltage

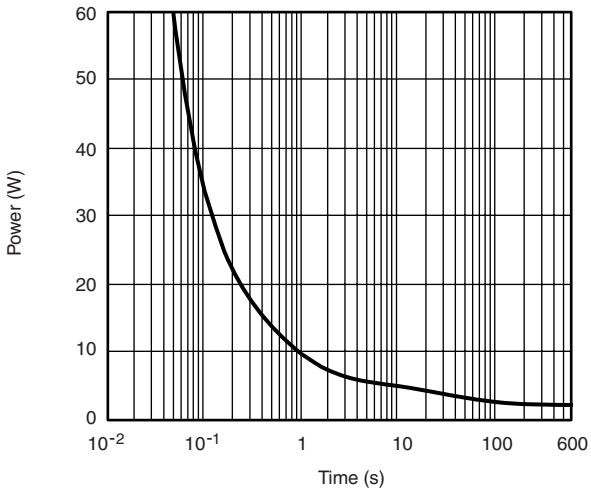


On-Resistance vs. Gate-to-Source Voltage

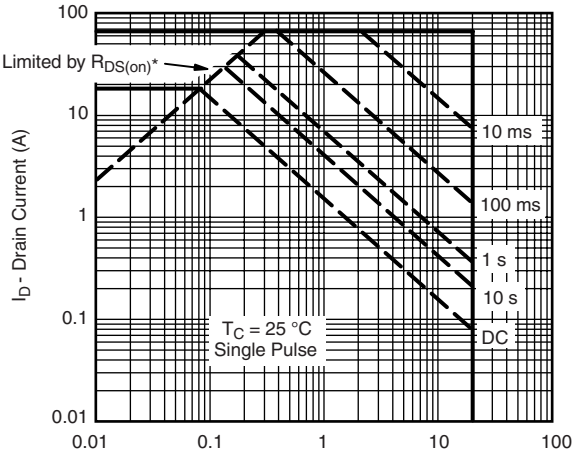
TYPICAL CHARACTERISTICS 25 °C, unless otherwise noted



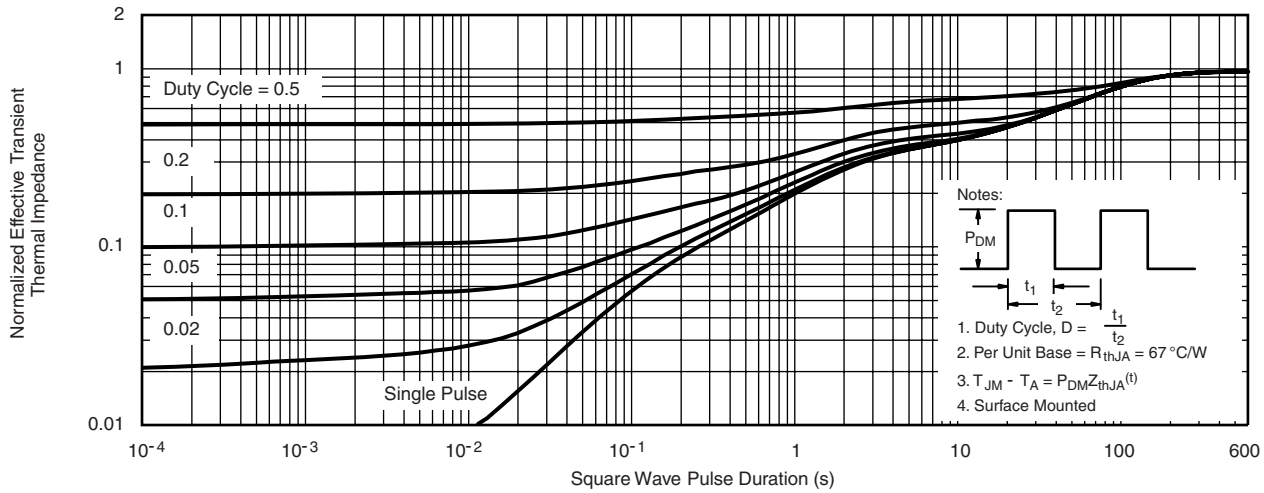
Threshold Voltage



Single Pulse Power

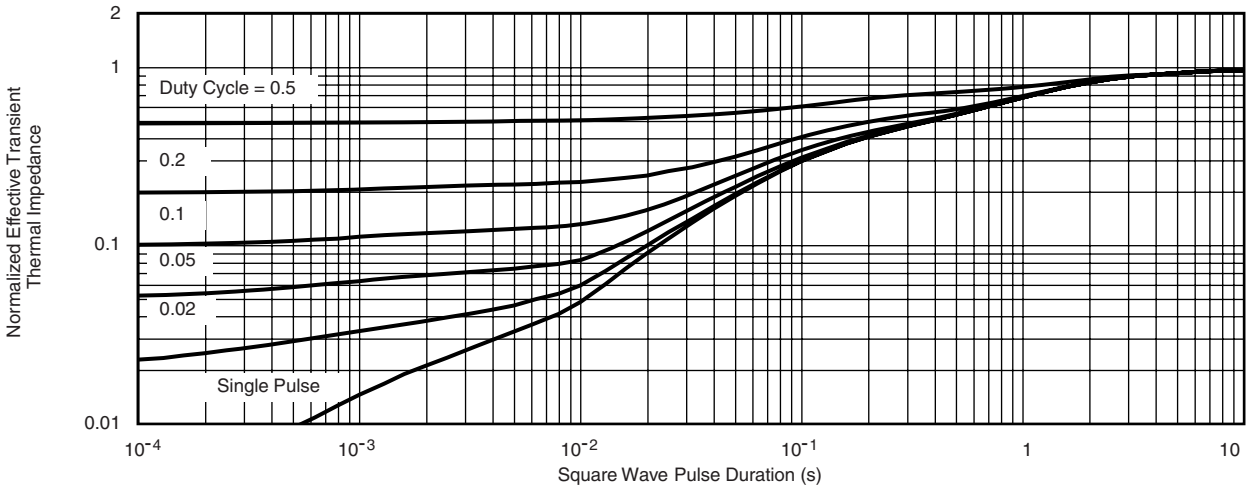


Safe Operating Area, Junction-to-Case



Normalized Thermal Transient Impedance, Junction-to-Ambient

TYPICAL CHARACTERISTICS 25 °C, unless otherwise noted



Normalized Thermal Transient Impedance, Junction-to-Foot

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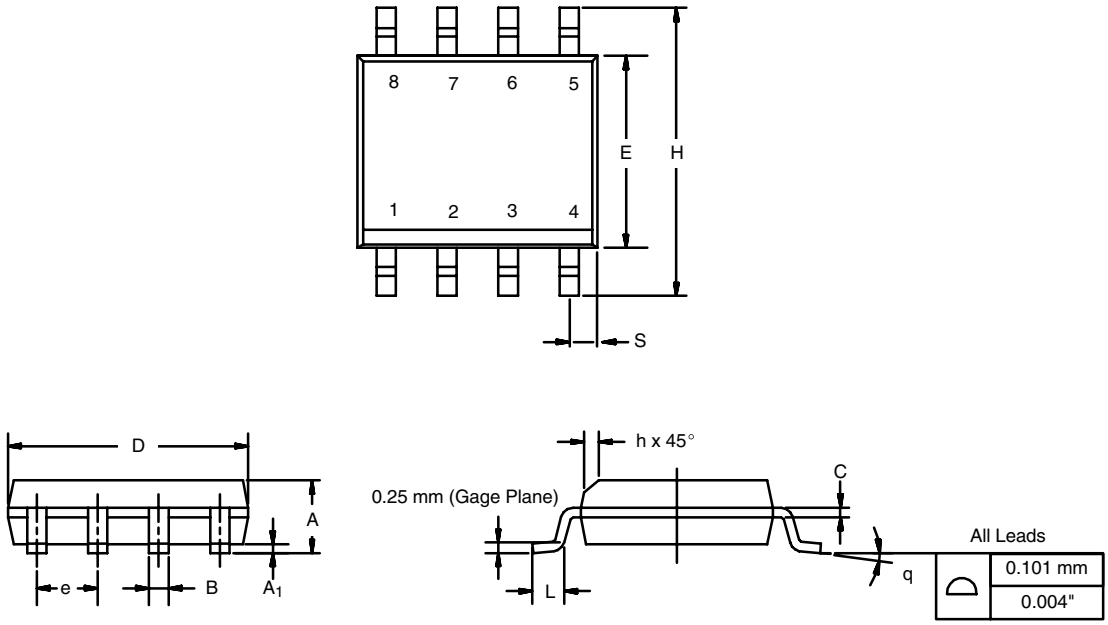
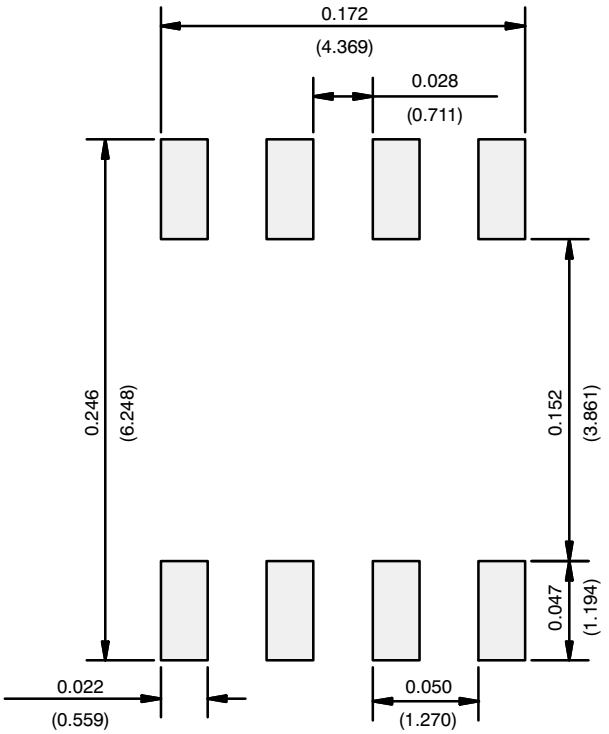
SOIC (NARROW): 8-LEAD
JEDEC Part Number: MS-012



DIM	MILLIMETERS		INCHES	
	Min	Max	Min	Max
A	1.35	1.75	0.053	0.069
A_1	0.10	0.20	0.004	0.008
B	0.35	0.51	0.014	0.020
C	0.19	0.25	0.0075	0.010
D	4.80	5.00	0.189	0.196
E	3.80	4.00	0.150	0.157
e	1.27 BSC		0.050 BSC	
H	5.80	6.20	0.228	0.244
h	0.25	0.50	0.010	0.020
L	0.50	0.93	0.020	0.037
q	0°	8°	0°	8°
S	0.44	0.64	0.018	0.026
ECN: C-06527-Rev. I, 11-Sep-06 DWG: 5498				

RECOMMENDED MINIMUM PADS FOR SO-8



Recommended Minimum Pads
Dimensions in Inches/(mm)

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