CM02D60-SOP8
Data Sheet

Version: 1.0

List of Contents

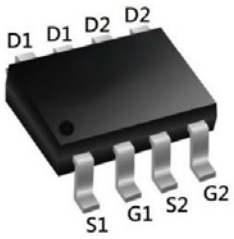
1. 650V 7.5Ω Dual N-Channel Power MOSFET Features

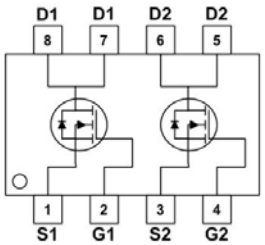
- Originative New Design
- Superior Avalanche Rugged Technology
- Robust Gate Oxide Technology
- Very Low Intrinsic Capacitances
- Excellent Switching Characteristics
- Unrivalled Gate Charge : 4nC (Typ.)
- Extended Safe Operating Area

2. Applications

- Switching Mode Power Supply
- HID Lamp
- BLDC Motor

3. Pin Description





4. Absolute Ratings (TA = 25℃ in a SOP8 package unless otherwise noted)

Parameter	Symbol	Value		Units
Drain-Source Voltage	V_{DS}	+600		V
Gate-Source Voltage	V_{GS}	±20		V
Junction Temperature Maximum	T_{JMAX}	150		°C
Storage Temperature	$T_{Storage}$	-25 to 150		°C

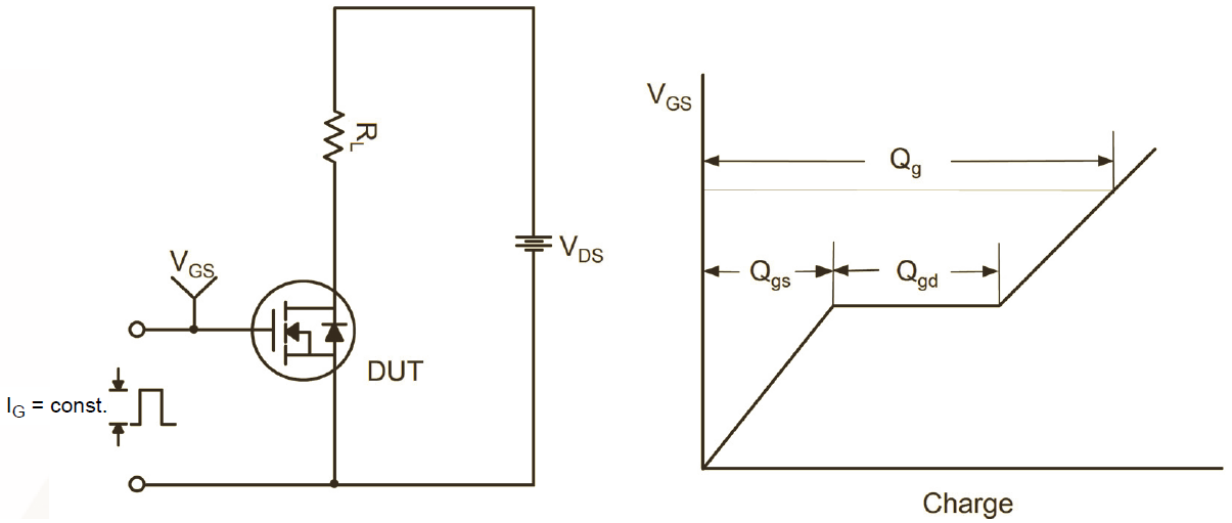
5. Thermal Characteristics

Parameter	Symbol	Value	Units
Thermal Resistance Junction-Ambient	$R_{\theta JA}$	65	°C/W

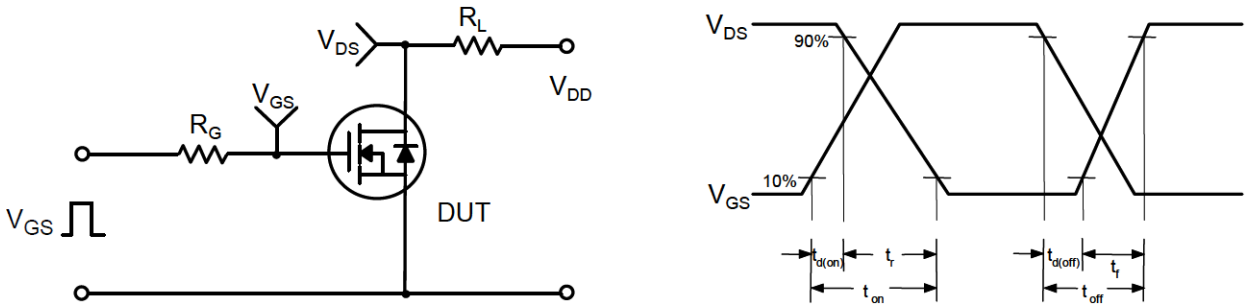
6. Electrical Characteristics

Static (T_J=25℃ unless otherwise specified)						
Parameter	**Symbol**	**Test Conditions**	**Min.**	**Typ.**	**Max.**	**Units**
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS} = 0V, I_D = 250uA	600	---	---	V
Gate-Body Leakage Current	I_{GSS}	V_{GS} = ±20V, V_{DS} = 0V	---	---	±100	nA
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} = 500V, V_{GS} = 0V	---	---	10	uA
		V_{DS} = 400V, V_{GS} = 0V, T_J = 125℃	---	---	100	
Drain-Source On-State Resistance	$R_{DS(on)}$	V_{GS} = 10V, I_D = 1A	---	---	7.5	Ω
Gate-Source Threshold Voltage	$V_{GS(th)}$	V_{DS} = V_{GS}, I_D = 250uA	1.5	---	4	V
Reverse Diode Characteristics						
Continuous Source Current	I_S	V_{GS} = 0V, V_{DS}Open, f=1MHz	---	---	5.5	A
Diode Forward Voltage	V_{SD}	I_S = 0.8A, V_{GS} = 0V	---	---	1.2	V
Reverse Recovery Time	t_{rr}	V_{GS} = 0V, I_S = 1A, dI_F/dt=50A/us	---	50	---	ns
Reverse Recovery Charge	Q_{rr}		---	18	---	nC

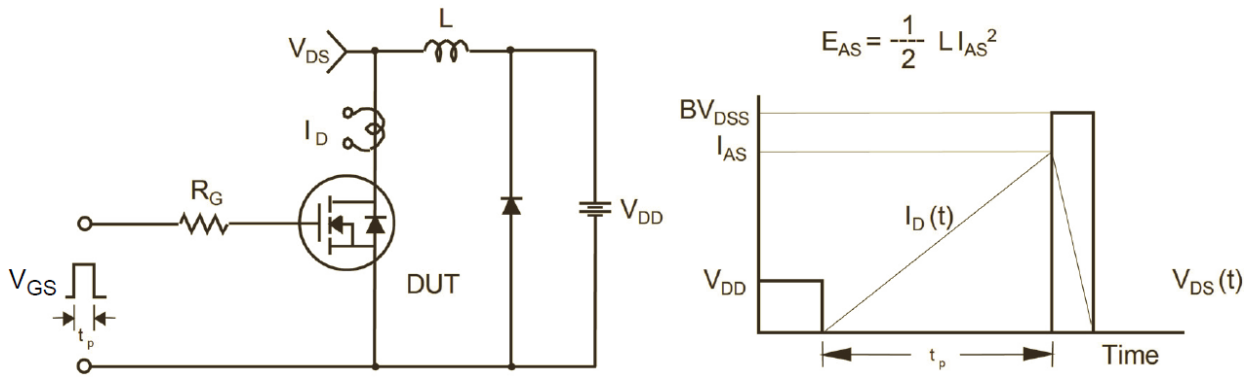
7. Test Circuit and Waveform



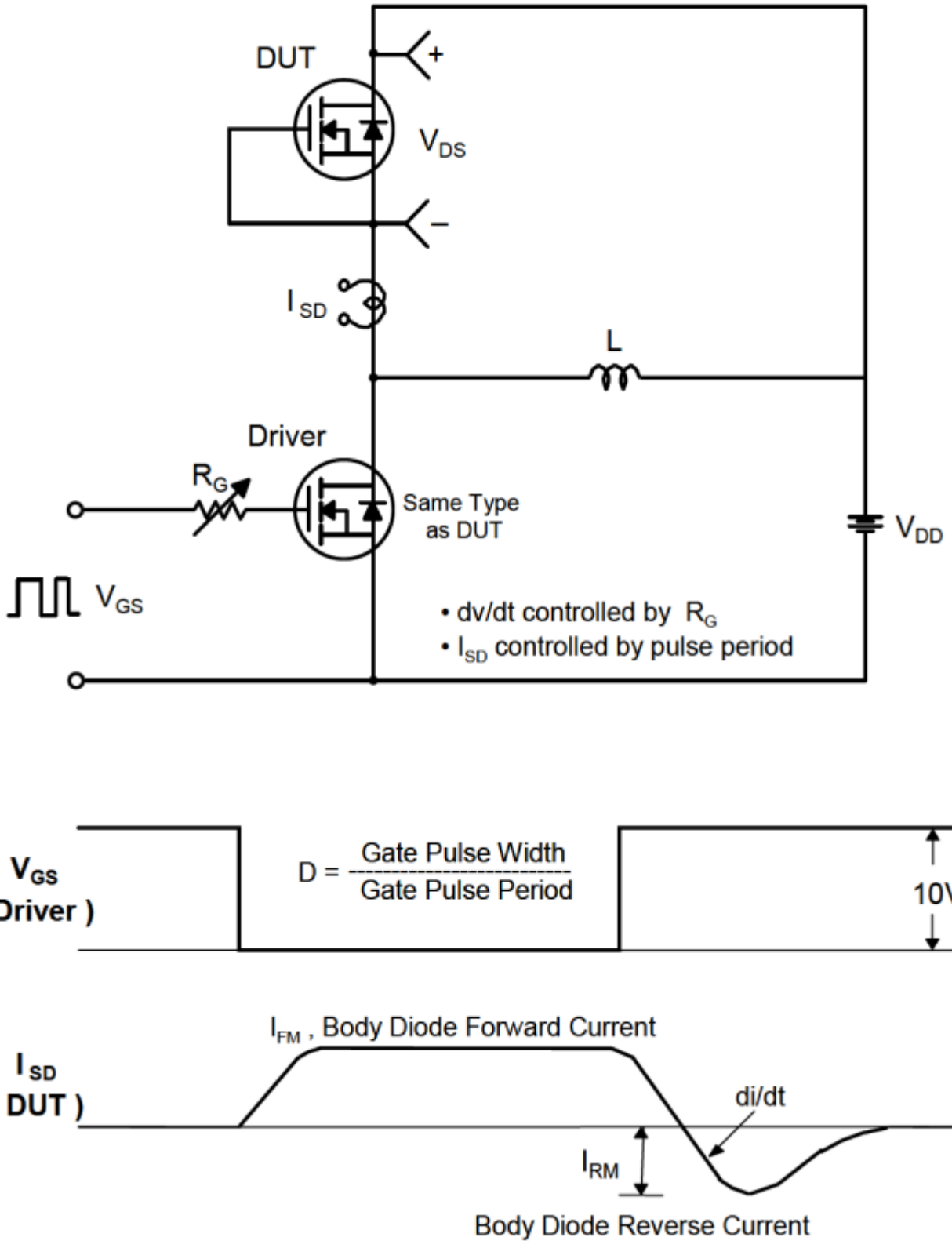
Gate Charge Test Circuit & Waveform



Resistive Switching Test Circuit & Waveforms

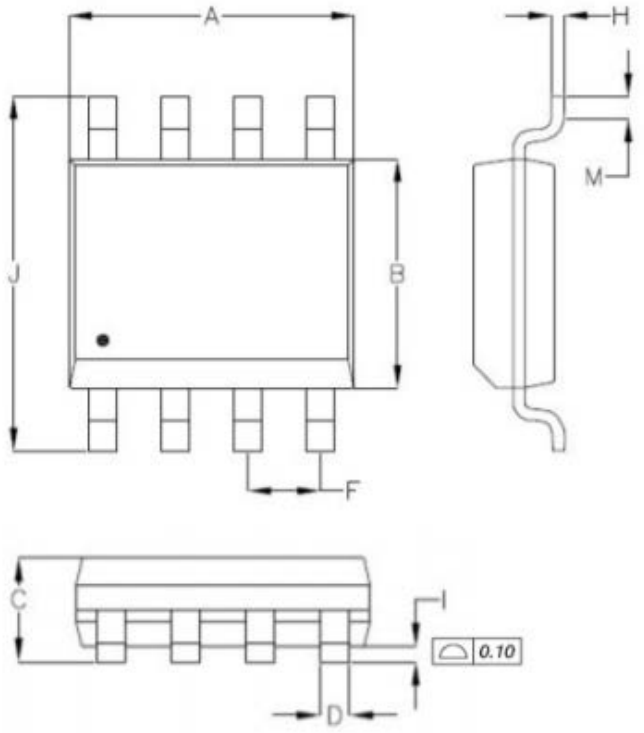


Unclamped Inductive Switching Test Circuit & Waveform



Peak Diode Recovery dv/dt Test Circuit & Waveforms

8. SOP8 Package Information



SYMBOLS	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	4.700	5.150	0.185	0.203
B	3.700	4.100	0.146	0.161
C	1.23	1.753	0.048	0.069
D	0.310	0.510	0.012	0.020
F	1.070	1.470	0.042	0.058
H	0.160	0.254	0.006	0.010
I	0.050	0.254	0.002	0.010
J	5.750	6.250	0.226	0.246
M	0.400	1.270	0.016	0.050

9. Marking Distinguish