GENERAL DESCRIPTION

- V_{DS}=-30V , ID=-5.3A
- $R_{DS(ON)}$, V_{GS}@-10V , I_{DS}@ -5.3A = 60mΩ
- $R_{DS(ON)}$, V_{GS}@-4.5V , I_{DS}@ -4.2A = 90mΩ

FEATURES

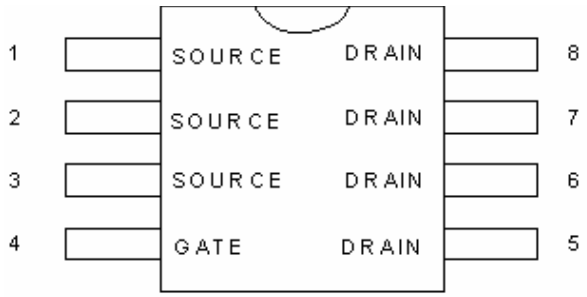
- Advanced trench process technology
- High Density Cell Design For Ultra Low On-Resistance
- Fully Characterized Avalanche Voltage and Current
- Improved Shoot –Through FOM

APPLICATIONS

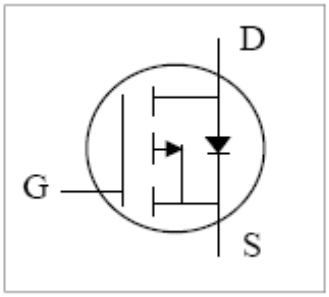
- Power Management in Notebook
- Portable Equipment
- Battery Powered System
- DC/DC Converter
- Load Switch
- DSC
- LCD Display inverter

PIN CONFIGURATION

8-PIN SOP (S08)
Top View



SYMBOL



P-Channel MOSFET

ORDERING INFORMATION

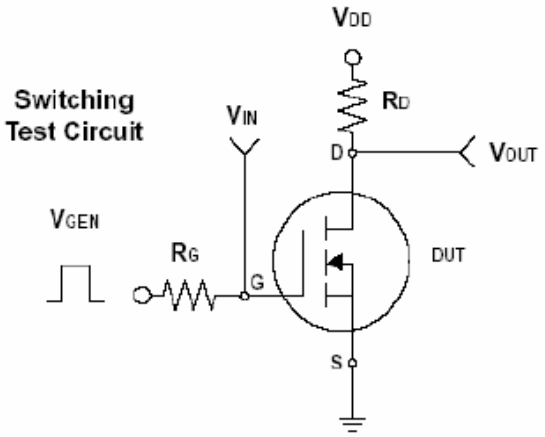
Part Number	Package
CMT9435G	SOP-8

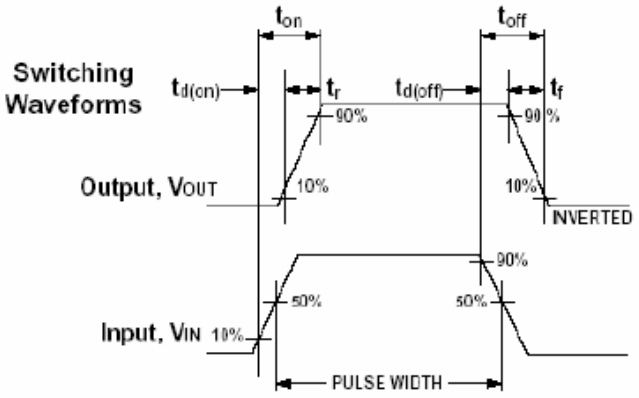
***Note:** G : Suffix for Pb Free Product

ABSOLUTE MAXIMUM RATINGS
(TA=25℃ unless otherwise noted)

Rating		Symbol	Value	Unit
Drain-Source Voltage		V_{DS}	-30	V
Gate-Source Voltage		V_{GS}	±20	V
Continuous Drain Current		I_D	-5.3	A
Pulsed Drain Current		I_{DM}	-20	A
Maximum Power Dissipation	T_A=25℃	P_D	2.5	W
	T_A=75℃			
Operating Junction Temperature Range		T_J	-55 to150	℃
Storage Temperature Range		T_{STG}	-55 to 150	℃
Junction-to-Ambient Thermal Resistance (PCB mount)		R_{qJA}	50	℃/W
Junction-to-Case Thermal Resistance		R_{qJC}	30	℃/W

Note : 1. Repetitive Rating : Pulse width limited by the Maximum junction temperation
2. 1-in^2 2oz Cu PCB board
3. Guaranteed by design ; not subject to production testing





ELECTRICAL CHARACTERISTICS

Unless otherwise specified, T_J = 25℃. C(unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Units
Static						
BV_{DSS}	Drain-Source Breakdown Voltage	V_{GS}=0V, I_D=-250uA	-30	-	-	V
$R_{DS(ON)}$	Drain-Source On-State Resistance	V_{GS}=-10V, I_D=-5.3A	-	50	60	mΩ
$R_{DS(ON)}$	Drain-Source On-State Resistance	V_{GS}=-4.5V, I_D=-4.2A	-	75	90	mΩ
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS}=V_{GS}, I_D=-250uA	-1.0	-1.5	-3.0	V
g_{fs}	Forward Transconductance	V_{DS}=10V, I_D=6A	4	7	-	S
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS}=-24V, V_{GS}=0V	-	-	-1	uA
I_{GSS}	Gate-Body Leakage	V_{GS}=±20V , V_{DS}=0V	-	-	±100	nA
Dynamic						
Q_g	Total Gate Charge	I_D=-5.3A	-	9.52	-	nC
Q_{gs}	Gate-Source Charge	V_{DS}=-15V	-	3.43	-	nC
Q_{gd}	Gate-Drain Charge	V_{GS}=-10V	-	1.71	-	nC
$t_{d(on)}$	Turn-On Delay Time	V_{DD}=-15V	-	10.8	-	ns
t_r	Turn-On Rise Time	I_D=-1A	-	2.33	-	ns
$t_{d(off)}$	Turn-Off Delay Time	R_G=6Ω,V_{GEN}=-10V	-	23.53	-	ns
t_f	Turn-Off Fall Time	R_L=15Ω	-	3.87	-	ns
C_{iss}	Input Capacitance	V_{GS}=0V	-	551.57	-	pF
C_{oss}	Output Capacitance	V_{DS}=-15V	-	90.96	-	pF
C_{rss}	Reverse Transfer Capacitance	f=1.0MHz	-	60.79	-	pF
Source-Drain Diode						
Is	Max. Diode Forward Current		-	-	-1.9	A
V_{SD}	Diode Forward Voltage	I_S=-5.3A, V_{GS}=0V,	-	-	-1.3	V

Notes:

1.Pulse test : Pulse width ≤300us , duty cycle ≤2%.

TYPICAL CHARACTERISTICS

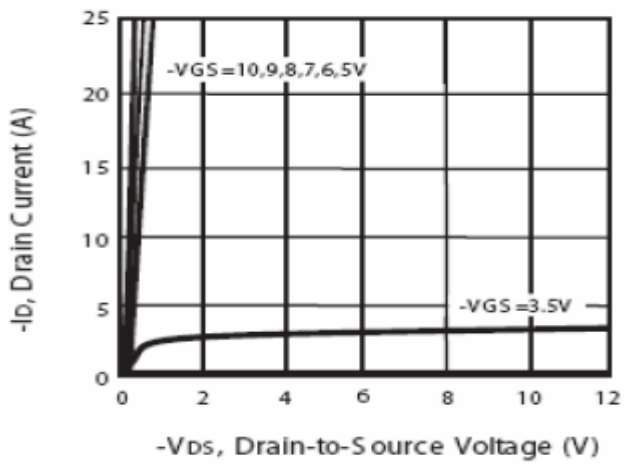


Figure 1. Output Characteristics

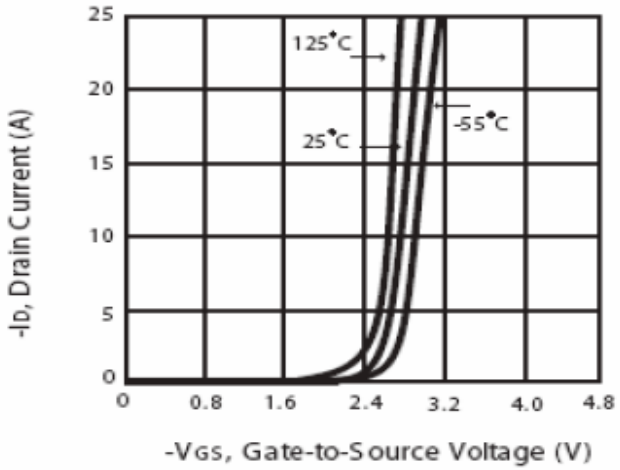


Figure 2. Transfer Characteristics

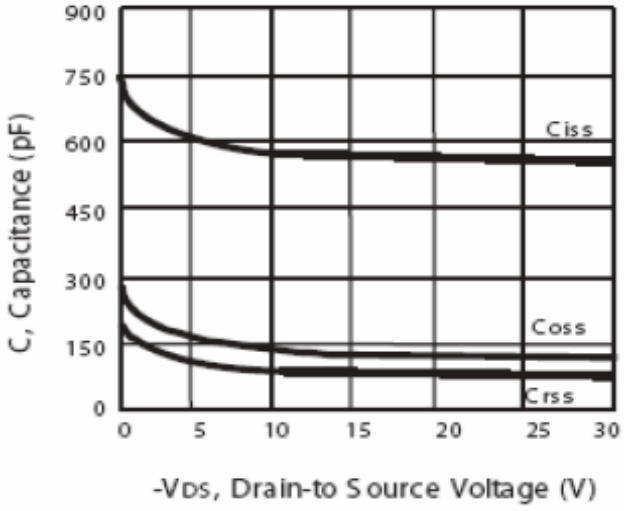


Figure 3. Capacitance

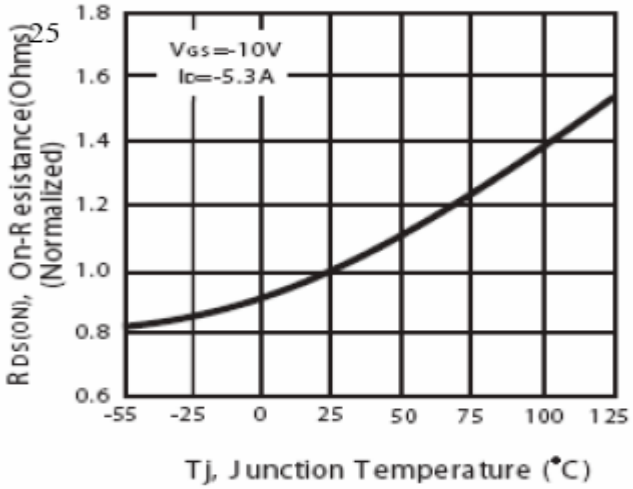


Figure 4. On-Resistance Variation with Temperature

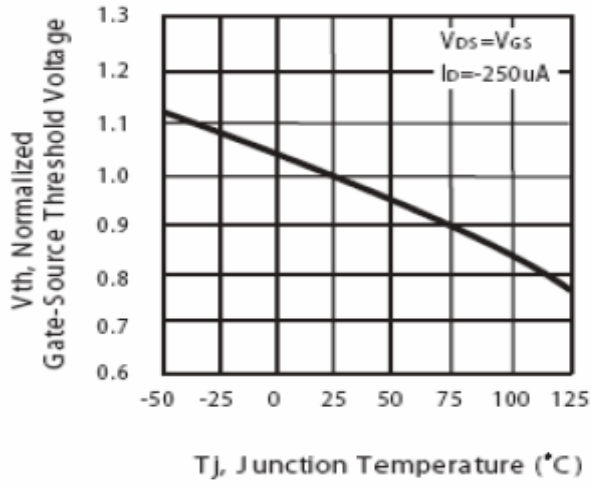


Figure 5. Gate Threshold Variation with Temperature

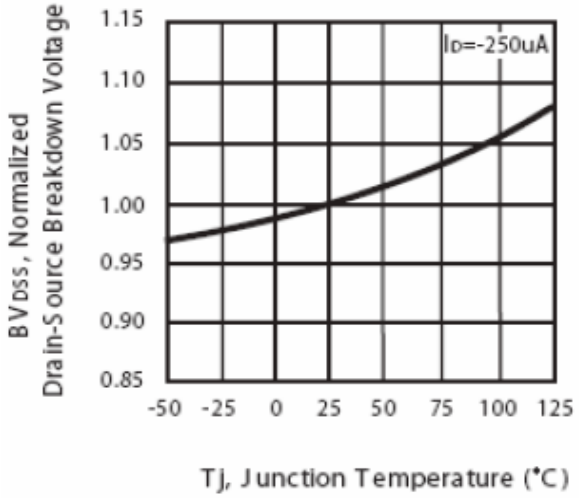


Figure 6. Breakdown Voltage Variation with Temperature

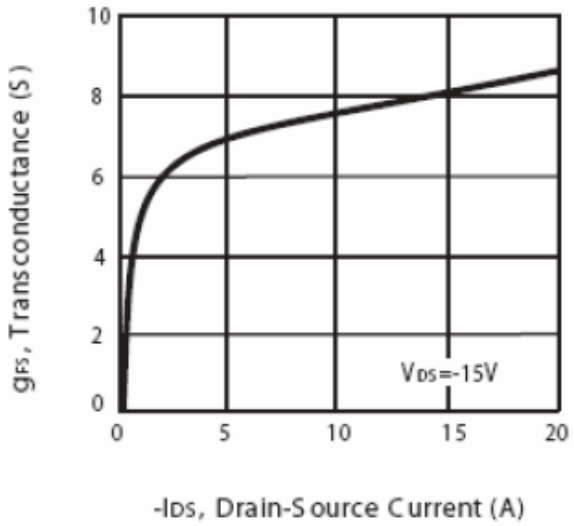


Figure 7. Transconductance Variation with Drain Current

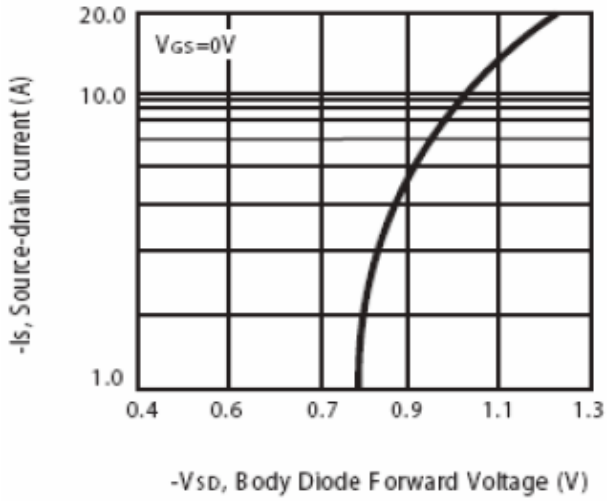


Figure 8. Body Diode Forward Voltag Variation with Source Curren

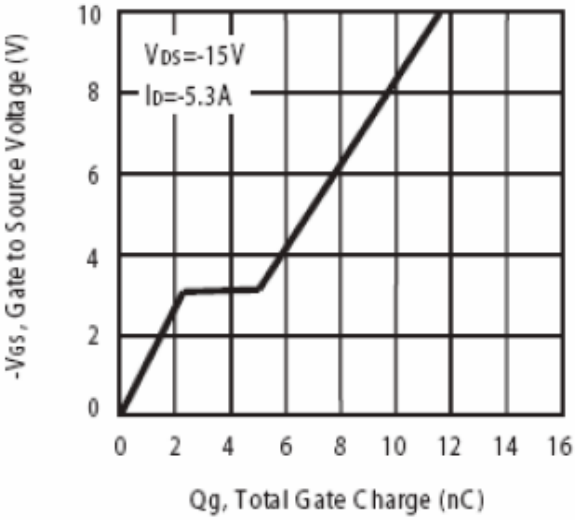


Figure 9. Gate Charge

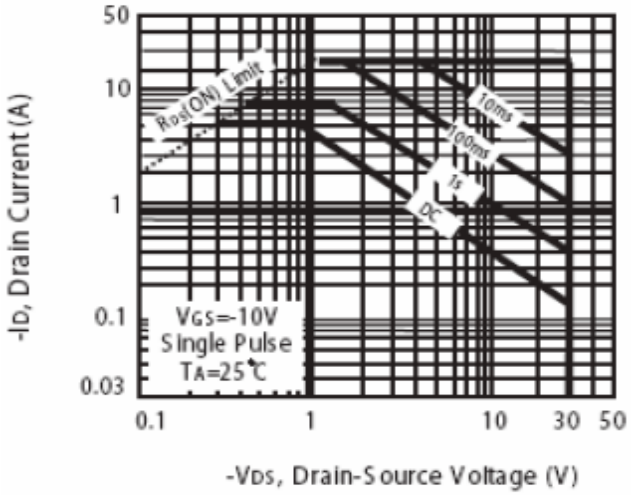
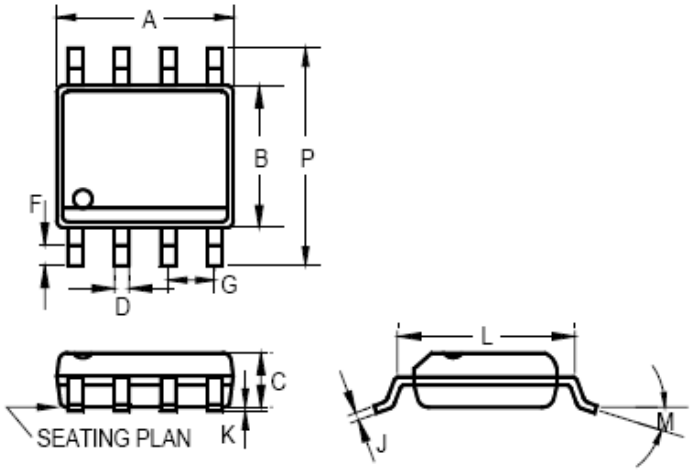


Figure 10. Maximum Safe Operating Area

PACKAGE DIMENSION

8-PIN SOP (S08)



	INCHES			MILLIMETERS		
	MIN	TYP	MAX	MIN	TYP	MAX
A	0.183	-	0.202	4.65	-	5.13
B	0.144	-	0.163	3.66	-	4.14
C	0.068	-	0.074	1.73	-	1.88
D	0.010	-	0.020	0.25	-	0.51
F	0.015	-	0.035	0.38	-	0.89
G	0.050 BSC			1.27 BSC		
J	0.007	-	0.010	0.19	-	0.25
K	0.005	-	0.010	0.13	-	0.25
L	0.189	-	0.205	4.80	-	5.21
M	-	-	8°	-	-	8°
P	0.228	-	0.244	5.79	-	6.20

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