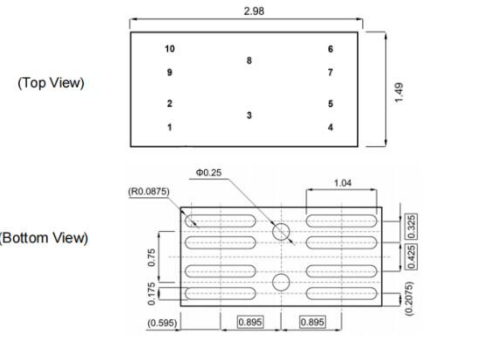
Product Summary

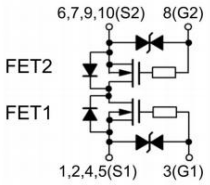
V_{SSS}	$R_{SS(ON)}$ max
12V	<2.75mΩ @V_{GS}=4.5V
	<2.90mΩ @V_{GS}=3.8V
	<3.95mΩ @V_{GS}=3.1V
	<6.10mΩ @V_{GS}=2.5V

Package & Internal Circuit



1,2,4,5. Source1 (FET1) 3. Gate1 (FET1)
6,7,9,10. Source2 (FET2) 8. Gate2 (FET2)

Equivalent circuit



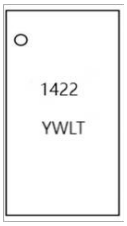
Description and Applications

- Battery protection switch
- Mobile device battery charging and discharging
- With ESD Protection, HBM Class 2

Ordering Information

Part Number	Package Type	Package Qty
CFC1422	WLCSP_2.98x1.49	8,000/Tape & Reel

Marking Information



Green product

1422--Part Number
Y--Year
W--Week
LT--Lot sequence

Absolute Maximum Rating (Tamb=25°C unless otherwise noted)

Parameter		Symbol	Value	Units
Source-Source Voltage		V_{SS}	12	V
Gate-Source Voltage		V_{GS}	±8	V
Source Current - Continuous	T_A=25°C	I_S	30	A
Pulsed Source Current		I_{SM}	120	A
Power Dissipation	T_A=25°C	P_D	3.2	W
Junction and Storage Temperature Range		T_J ,T_{STG}	-55 to 150	°C

Thermal Characteristics

Parameter		Symbol	Typ	Max	Units
Maximum Junction-to-Ambient	t ≤ 10s	$R_{\theta JA}$		38	°C/W
Maximum Junction-to-Ambient	Steady-State	$R_{\theta JA}$		54	°C/W

Electrical Characteristics (T_a=25°C unless otherwise noted)

Symbol	Parameter	Conditions	Min	Typ	Max	Units
Static Parameters						
BV_{SSS}	Source-Source Breakdown Voltage	I_S= 250μA, V_{GS}=0V	12			V
I_{SSS}	Zero Gate Voltage Drain Current	V_{SS}=12V, V_{GS}=0V			1	μA
		T_J =55℃			5	μA
I_{GSS}	Gate-Body leakage current	V_{SS}=0V, V_{GS}= ±8V			±10	μA
$V_{GS(th)}$	Gate Threshold Voltage	V_{SS}=V_{GS}, I_S=250μA	0.4	0.9	1.5	V
$R_{SS(ON)}$	Static-Source to Source on-Resistance	V_{GS}=4.5V, I_S=6A	1.45	2.00	2.75	mΩ
		V_{GS}=3.8V, I_S=6A	1.54	2.15	2.90	mΩ
		V_{GS}=3.1V, I_S=6A	1.68	2.40	3.95	mΩ
		V_{GS}=2.5V, I_S=6A	2.10	2.90	6.10	mΩ
g_{FS}	Forward Trans conductance	V_{SS}=5V, I_S=5A			38	S
V_{FSS}	Forward Source to Source Voltage	V_{GS}= 0V, I_S=6A			1.2	V
Dynamic parameters						
C_{iss}	Input Capacitance	V_{GS}=0V V_{SS}=10V f=100KHz		4250		pF
C_{oss}	Output Capacitance			460		pF
C_{rss}	Reverse Transfer Capacitance			122		pF
Switching Parameters						
Q_g	Total Gate Charge	V_{GS}=4.5V V_{SS}=6V I_S=6A		35		nC
Q_{gs}	Gate Source Charge			7		nC
Q_{gd}	Gate Drain Charge			5		nC
$t_{D(on)}$	Turn-On Delay Time	V_{GS}=4.5V V_{SS}=6V R_L=1Ω R_G=3Ω		0.92		μs
t_r	Turn-On Rise Time			1.3		μs
$t_{D(off)}$	Turn-Off Delay Time			2.85		μs
t_f	Turn-Off Fall Time			3.5		μs

TYPICAL ELECTRICAL AND THERMAL CHARACTERISTICS

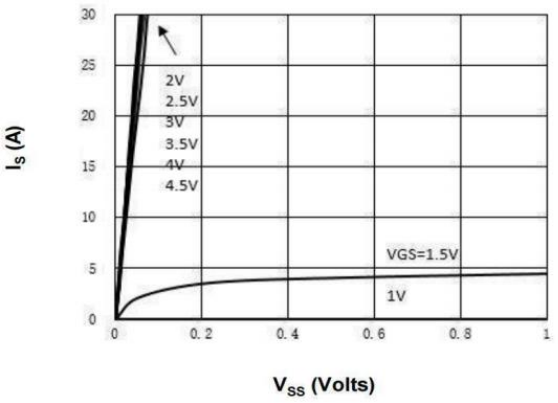


Figure 1: On-Region Characteristics

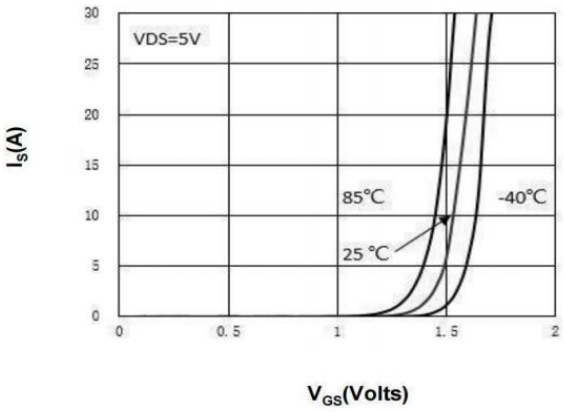


Figure 2: Transfer Characteristics

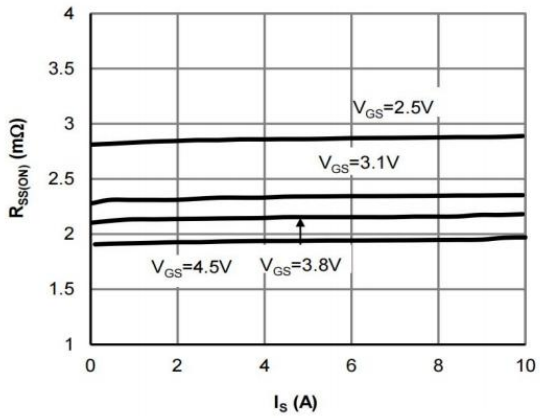


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

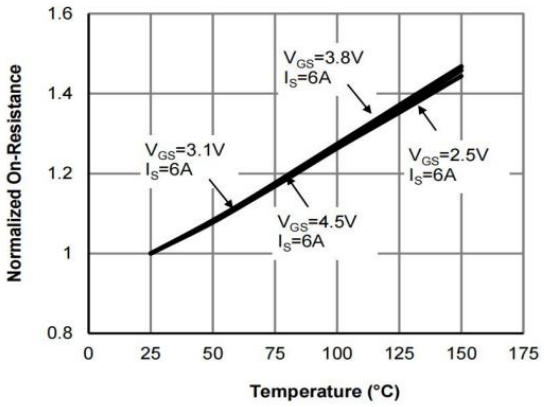


Figure 4: On-Resistance vs. Junction Temperature

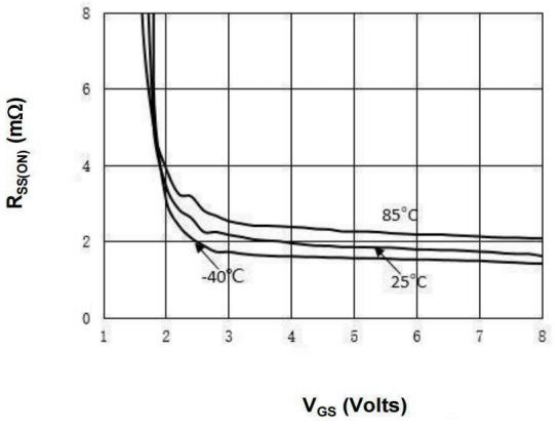


Figure 5: On-Resistance vs. Gate-Source Voltage

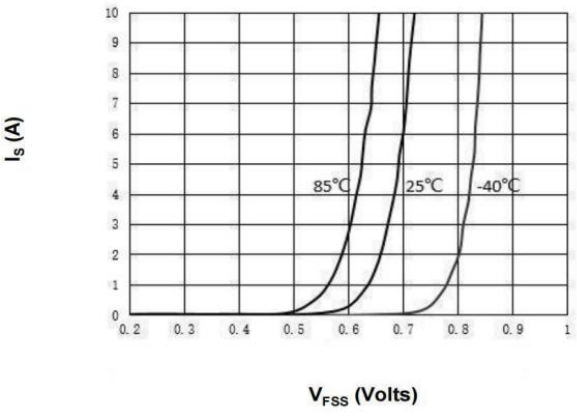


Figure 6: Forward Source to Source Characteristics

TYPICAL ELECTRICAL AND THERMAL CHARACTERISTICS

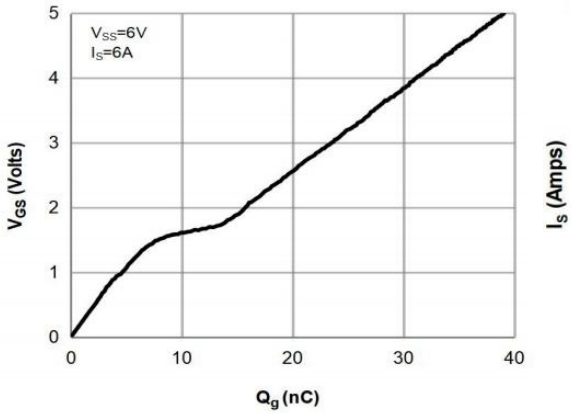


Figure 7: Gate-Charge Characteristics

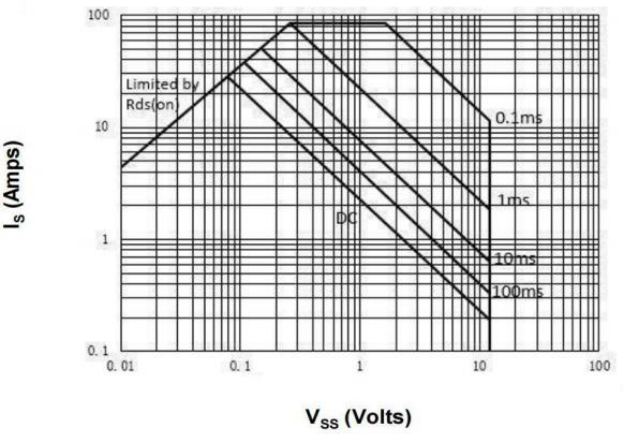


Figure 8: Maximum Forward Biased Safe Operating Area

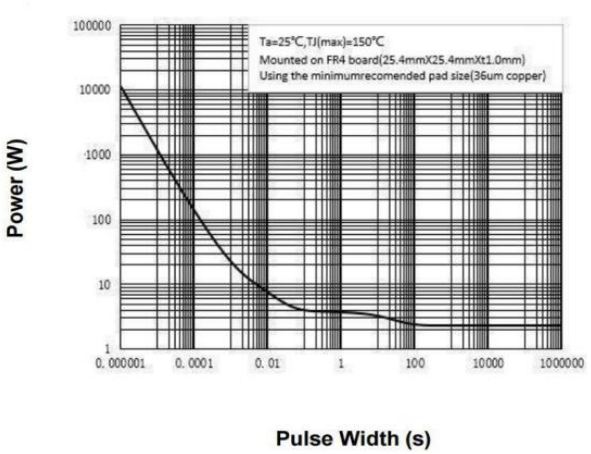


Figure 9: Single Pulse Power Rating Junction-to Ambient

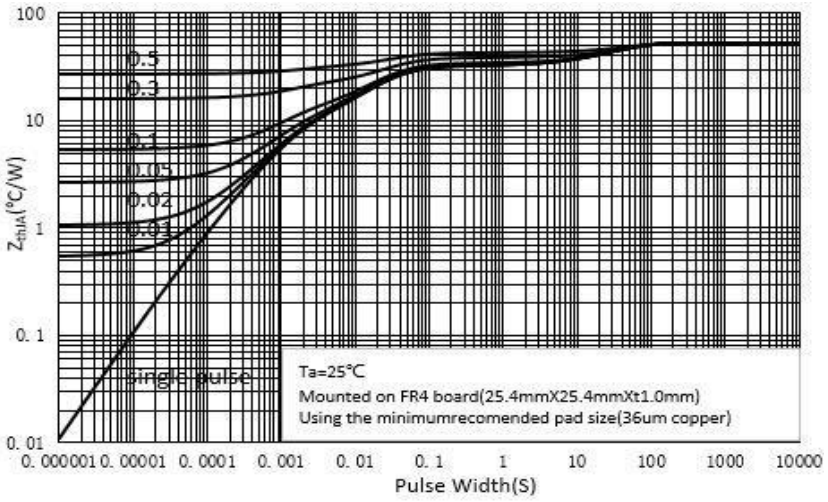
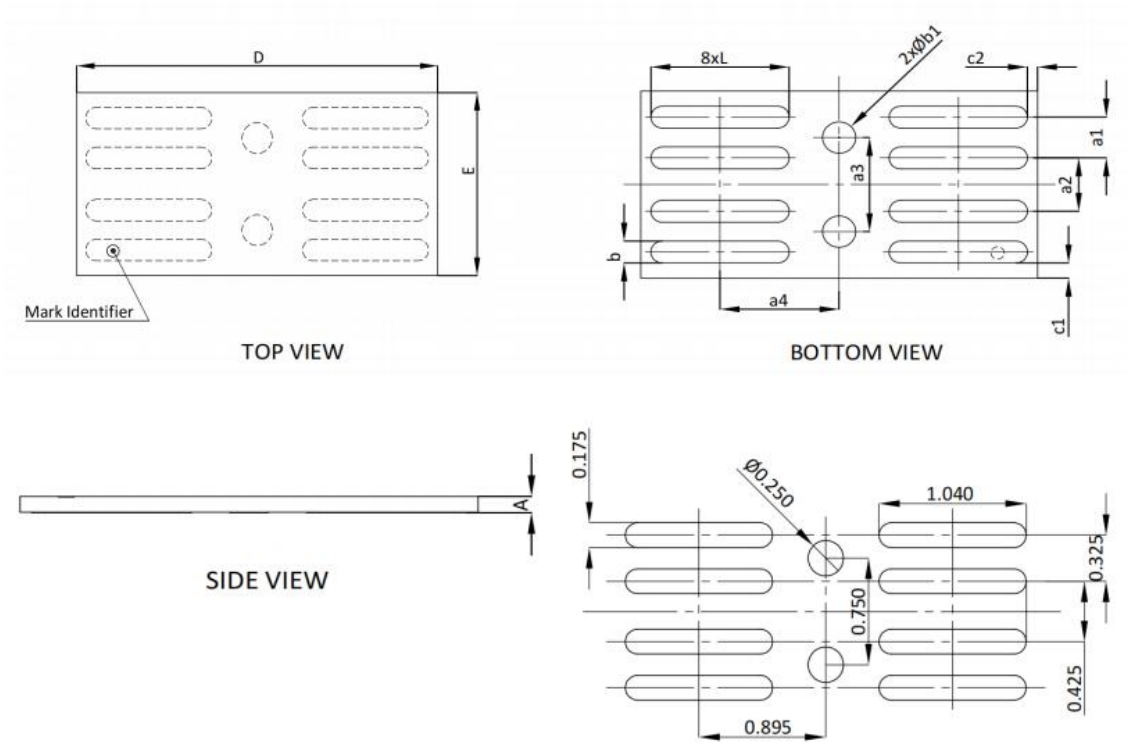


Figure 10: Normalized Maximum Transient Thermal Impedance

CSP2.98x1.49 Package



SYMBOLS	DIMENSION IN MM			DIMENSION IN INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.101	0.117	0.135	0.0025	0.0037	0.0048
D	2.950	2.980	3.010	0.1161	0.1173	0.1185
E	1.460	1.490	1.520	0.0575	0.0587	0.0598
L	1.010	1.040	1.070	0.0398	0.0409	0.0421
a1	0.325BSC			0.0128BSC		
a2	0.425BSC			0.0167BSC		
a3	0.750BSC			0.0295BSC		
a4	0.895BSC			0.0352BSC		
b	0.145	0.175	0.205	0.0057	0.0069	0.0081
b1	0.220	0.250	0.280	0.0087	0.0098	0.0110
c1	—	0.120	—	—	0.0047	—
c2	—	0.075	—	—	0.0030	

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