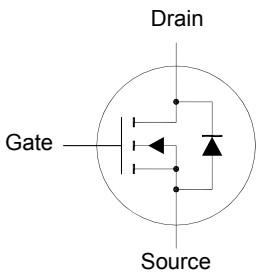
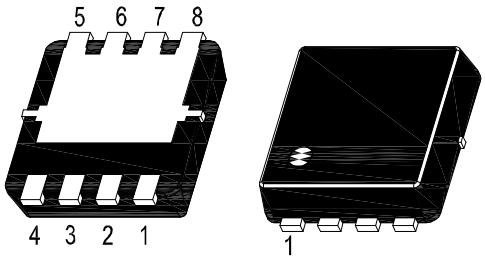
SFTN7200MP

N-Channel Enhancement Mode MOSFET





1. Source 2. Source 3. Source 4. Gate
5. Drain 6. Drain 7. Drain 8. Drain
DFN3030 Plastic Package

Absolute Maximum Ratings

Parameter		Symbol	Value	Unit
Drain-Source Voltage		V_{DS}	30	V
Drain-Gate Voltage		V_{GS}	± 20	V
Drain Current - Continuous [1]	T_C = 25℃ T_C = 100℃	I_D	40 31	A
Drain Current - Continuous	T_A = 25℃ T_A = 70℃	I_{DSM}	15.8 12.7	A
Power Dissipation [3]	T_C = 25℃ T_C = 100℃	P_D	62 25	W
Power Dissipation [4]	T_A = 25℃ T_A = 70℃	P_{DSM}	3.1 2	W
Drain Current - Pulsed [2]		I_{DM}	146	A
Operating Junction and Storage Temperature Range		T_j, T_{stg}	- 55 to + 150	℃

Thermal Characteristics

Parameter		Symbol	Max.	Unit
Thermal Resistance - Junction to Ambient [4]	t ≤ 10s	$R_{\theta JA}$	40	℃/W
Thermal Resistance - Junction to Ambient [4] [5]	Steady-State	$R_{\theta JA}$	75	℃/W
Thermal Resistance - Junction to Case	Steady-State	$R_{\theta JC}$	2	℃/W

[1] The maximum current rating is limited by bond-wires.

[2] Repetitive rating, pulse width limited by junction temperature $T_{J(MAX)}$=150°C. Ratings are based on low frequency and duty cycles to keep initial T_J =25°C.

[3] The power dissipation P_D is based on $T_{J(MAX)}$=150°C, using junction-to-case thermal resistance, and is more useful in setting the upper dissipation limit for cases where additional heatsinking is used.

[4] The value of $R_{\theta JA}$ is measured with the device mounted on 1in^2 FR-4 board with 2oz. Copper, in a still air environment with T_A =25°C. The Power dissipation P_{DSM} is based on $R_{\theta JA}$ t ≤ 10s value and the maximum allowed junction temperature of 150°C. The value in any given application depends on the user's specific board design.

[5] The $R_{\theta JA}$ is the sum of the thermal impedence from junction to case $R_{\theta JC}$ and case to ambient.

Winning Team
互創國際

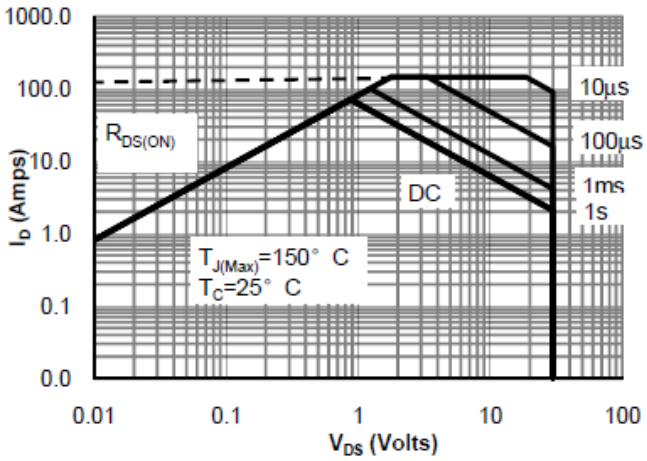
Dated: 26/06/2017

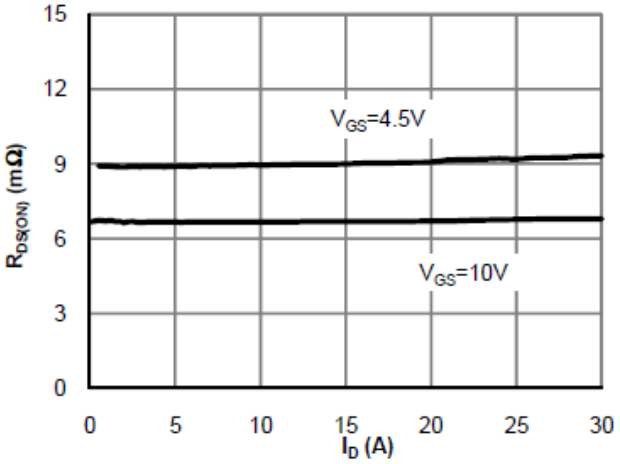
Characteristics at T_j = 25℃ unless otherwise specified

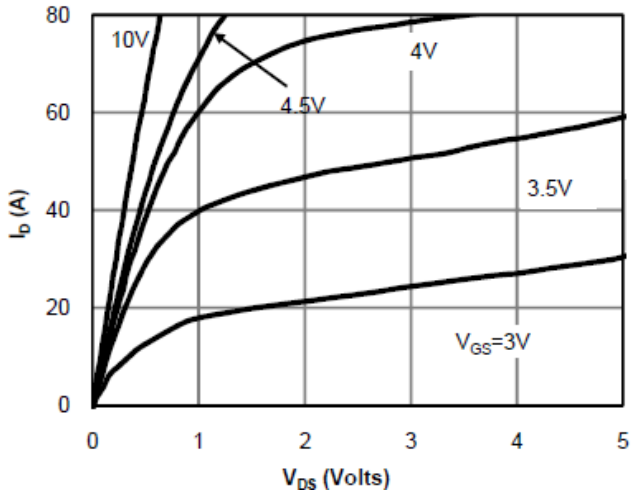
Parameter	Symbol	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage at I_D = 250 μA	BV_{DSS}	30	-	-	V
Gate-Source Threshold Voltage at V_{DS} = V_{GS}, I_D = 250 uA	V_{GSth}	1.3	-	2.4	V
Drain-Source Leakage Current at V_{DS} = 30 V at V_{DS} = 30 V,T_J = 55°C	I_{DSS}	- -	- -	1 5	μA
Gate-Source Leakage Current at V_{GS} = ± 20 V	I_{GSS}	-	-	100	nA
Drain-Source On-State Resistance at V_{GS} = 10 V, I_D = 20 A at V_{GS} = 4.5 V, I_D = 15 A	$R_{DS(on)}$	-	-	8 11	mΩ
Forward Transconductance at V_{DS} = 5 V, I_D = 20 A	g_{FS}	-	60	-	S
Input Capacitance at V_{GS} = 0 V,V_{DS} = 15 V, f = 1 MHz	C_{iss}	-	1090	-	pF
Output Capacitance at V_{GS} = 0 V, V_{DS} = 15 V, f = 1 MHz	C_{oss}	-	490	-	pF
Reverse Transfer Capacitance at V_{GS} = 0 V, V_{DS} = 15 V, f = 1 MHz	C_{rss}	-	38	-	pF
Turn-On Delay Time at V_{GS} = 10 V, V_{DS} = 15 V, R_L = 0.75 Ω, R_{GEN} = 3 Ω	$t_{d(on)}$	-	5	-	ns
Turn-On Rise Time at V_{GS} = 10 V, V_{DS} = 15 V, R_L = 0.75 Ω, R_{GEN} = 3 Ω	t_r	-	2	-	ns
Turn-Off Delay Time at V_{GS} = 10 V, V_{DS} = 15 V, R_L = 0.75 Ω, R_{GEN} = 3 Ω	t_{off}	-	16	-	ns
Turn-Off Fall Time at V_{GS} = 10 V, V_{DS} = 15 V, R_L = 0.75 Ω, R_{GEN} = 3 Ω	t_f	-	2	-	ns

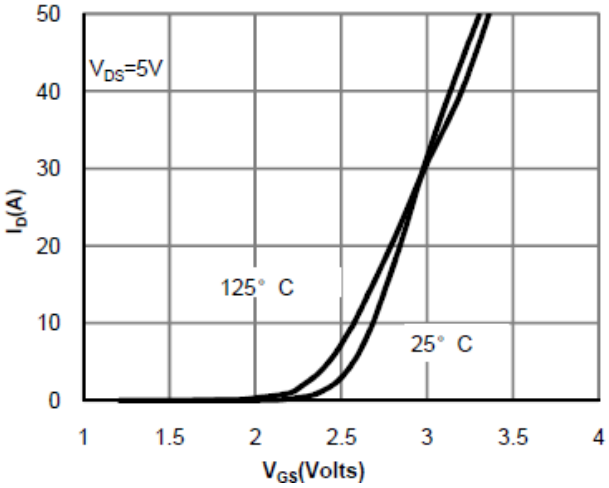
Drain-Source Diode Characteristics and Maximum Ratings

Parameter	Symbol	Max.	Unit
Drain-Source Diode Forward Voltage at V_{GS} = 0 V, I_S = 1 A	V_{SD}	1	V







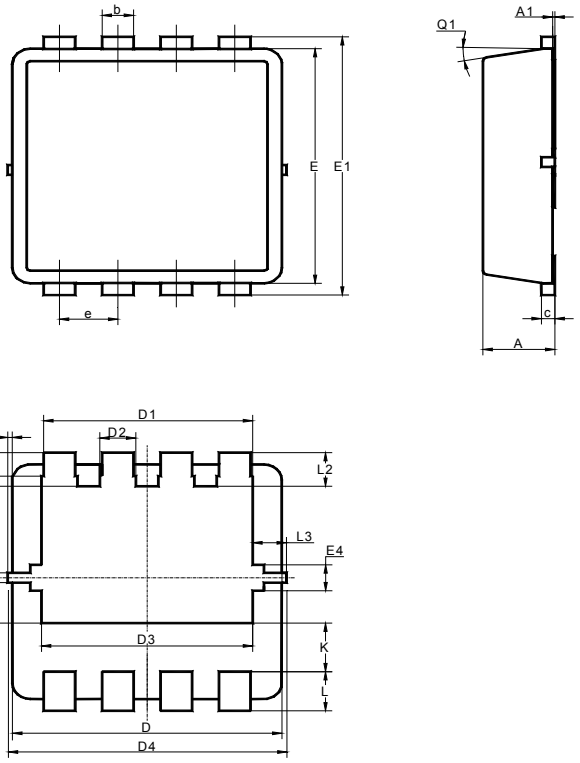


Winning Team
互創國際

Dated: 26/06/2017

SFTN7200MP

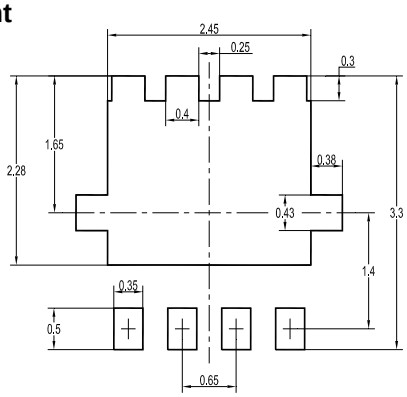
DFN3030 Package Outline Dimensions (Units: mm)



UNIT	A	A1	b	c	D	D1	D2	D3	D4	E	E1	E2	E3
mm	0.9	0.05	0.35	0.25	3.1	2.45	0.5	2.7	3.2	3.1	3.3	1.85	0.68
	0.7	0	0.24	0.1	2.9	2.2	0.3	2.4	3	2.9	3.1	1.65	0.48

UNIT	E4	E5	E6	e	K	L	L1	L2	L3	Q1
mm	0.43	0.4	0.25	0.7	0.72	0.5	0.1	0.53	0.475	12°
	0.23	0.2	0.075	0.6	0.52	0.3	0	0.33	0.275	0°

Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
DFN3030	8	4 ± 0.1	0.157 ± 0.004	330	13	3,000

Winning Team
互創國際

Dated: 26/06/2017