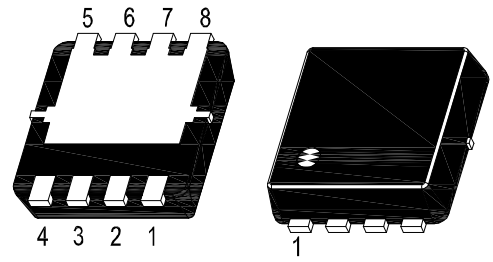
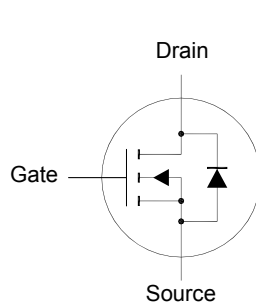


SFTN7210MP

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	I_D	50 39	A
		$T_C = 25^\circ\text{C}$ $T_C = 100^\circ\text{C}$	
Drain Current - Continuous	I_{DSM}	30 24	A
		$T_A = 25^\circ\text{C}$ $T_A = 70^\circ\text{C}$	
Power Dissipation	P_D	83 33	W
		$T_C = 25^\circ\text{C}$ $T_C = 100^\circ\text{C}$	
Power Dissipation ¹⁾	P_{DSM}	6.2 4	W
		$T_A = 25^\circ\text{C}$ $T_A = 70^\circ\text{C}$	
Drain Current - Pulsed	I_{DM}	250	A
Avalanche energy L=0.1mH	E_{AS}	101	mJ
Operating Junction and Storage Temperature Range	T_j, T_{stg}	- 55 to + 150	$^\circ\text{C}$

Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance - Junction to Ambient ¹⁾	$R_{\theta JA}$	20	$^\circ\text{C/W}$
			$t \leq 10\text{s}$
Thermal Resistance - Junction to Ambient ¹⁾	$R_{\theta JA}$	55	$^\circ\text{C/W}$
			Steady-State
Thermal Resistance - Junction to Case	$R_{\theta JC}$	1.5	$^\circ\text{C/W}$
			Steady-State

¹⁾ The value of $R_{\theta JA}$ is measured with the device mounted on 1in² FR-4 board with 2oz. Copper, in a still air environment with $T_A = 25^\circ\text{C}$. The Power dissipation P_{DSM} is based on $R_{\theta JA}$ $t \leq 10\text{s}$ value and the maximum allowed junction temperature of 150°C . The value in any given application depends on the user's specific board design, and the maximum temperature of 150°C may be used if the PCB allows it.

SFTN7210MP

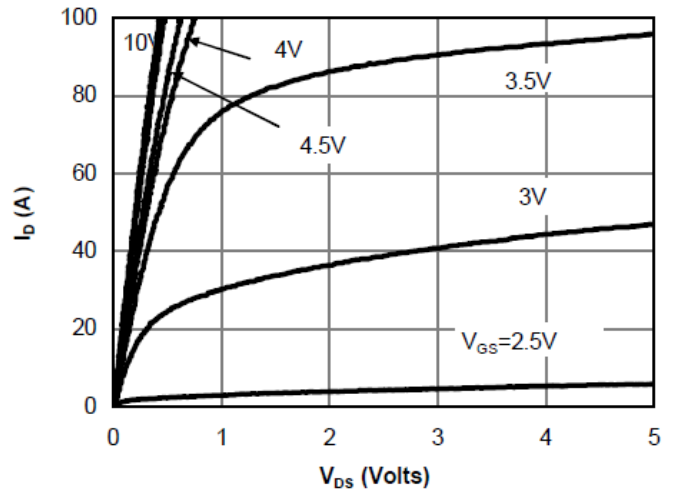
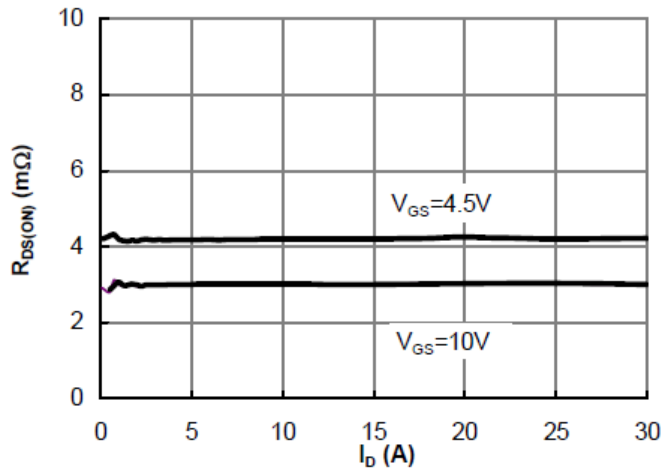
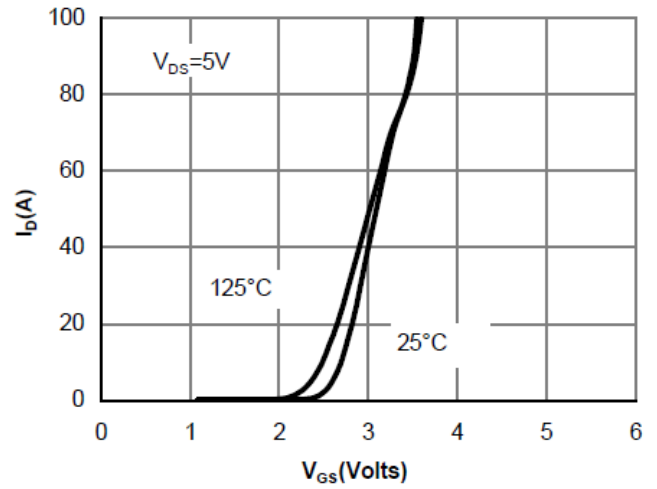
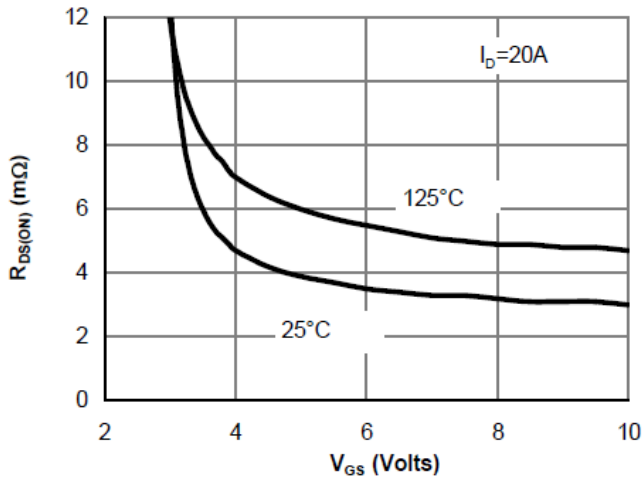
Characteristics at $T_J = 25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage at $I_D = 250 \mu\text{A}$	BV_{DSS}	30	-	-	V
Gate-Source Threshold Voltage at $V_{DS} = V_{GS}, I_D = 250 \mu\text{A}$	V_{GSth}	1.3	-	2.3	V
Drain-Source Leakage Current at $V_{DS} = 30 \text{ V}$ at $V_{DS} = 30 \text{ V}, T_J = 55^\circ\text{C}$	I_{DSS}	- -	- -	1 5	μA
Gate-Source Leakage Current at $V_{GS} = \pm 20 \text{ V}$	I_{GSS}	-	-	100	nA
Drain-Source On-State Resistance at $V_{GS} = 10 \text{ V}, I_D = 20 \text{ A}$ at $V_{GS} = 10 \text{ V}, I_D = 20 \text{ A}, T_J = 125^\circ\text{C}$ at $V_{GS} = 4.5 \text{ V}, I_D = 20 \text{ A}$	$R_{DS(on)}$	- - -	- - -	4 6.2 5.8	m Ω
Forward Transconductance at $V_{DS} = 5 \text{ V}, I_D = 20 \text{ A}$	g_{FS}	-	105	-	S
Input Capacitance at $V_{GS} = 0 \text{ V}, V_{DS} = 15 \text{ V}, f = 1 \text{ MHz}$	C_{iss}	-	-	2380	pF
Output Capacitance at $V_{GS} = 0 \text{ V}, V_{DS} = 15 \text{ V}, f = 1 \text{ MHz}$	C_{oss}	-	-	940	pF
Reverse Transfer Capacitance at $V_{GS} = 0 \text{ V}, V_{DS} = 15 \text{ V}, f = 1 \text{ MHz}$	C_{rss}	-	-	95	pF
Turn-On Delay Time at $V_{GS} = 10 \text{ V}, V_{DS} = 15 \text{ V}, R_L = 0.75 \Omega, R_{GEN} = 3 \Omega$	$t_{d(on)}$	-	7.3	-	ns
Turn-On Rise Time at $V_{GS} = 10 \text{ V}, V_{DS} = 15 \text{ V}, R_L = 0.75 \Omega, R_{GEN} = 3 \Omega$	t_r	-	3.7	-	ns
Turn-Off Delay Time at $V_{GS} = 10 \text{ V}, V_{DS} = 15 \text{ V}, R_L = 0.75 \Omega, R_{GEN} = 3 \Omega$	t_{off}	-	21.2	-	ns
Turn-Off Fall Time at $V_{GS} = 10 \text{ V}, V_{DS} = 15 \text{ V}, R_L = 0.75 \Omega, R_{GEN} = 3 \Omega$	t_f	-	3.3	-	ns

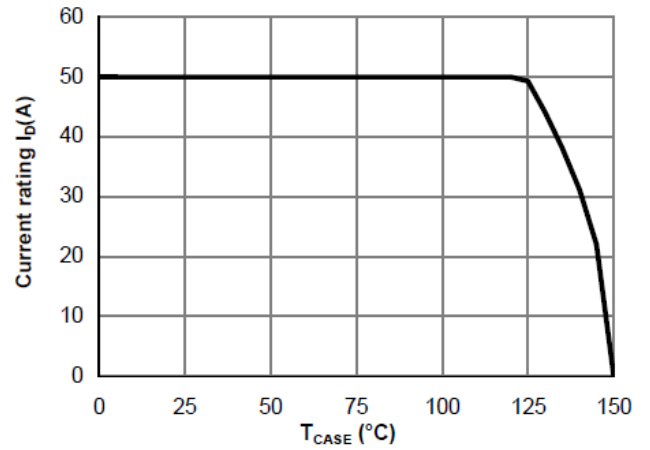
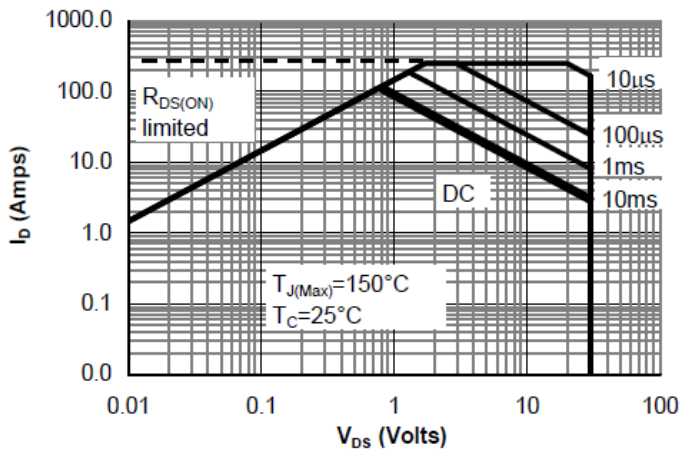
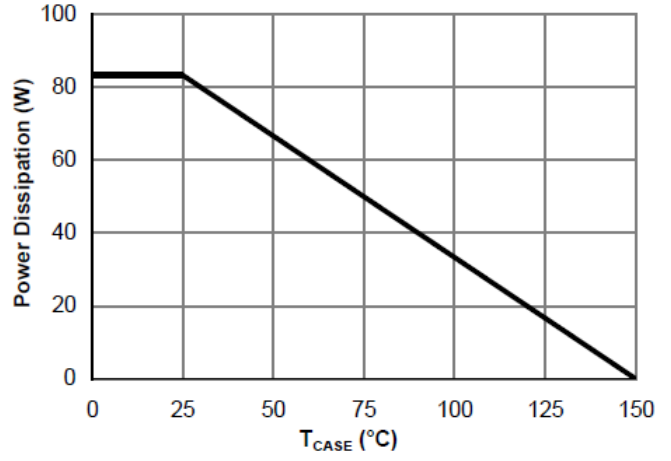
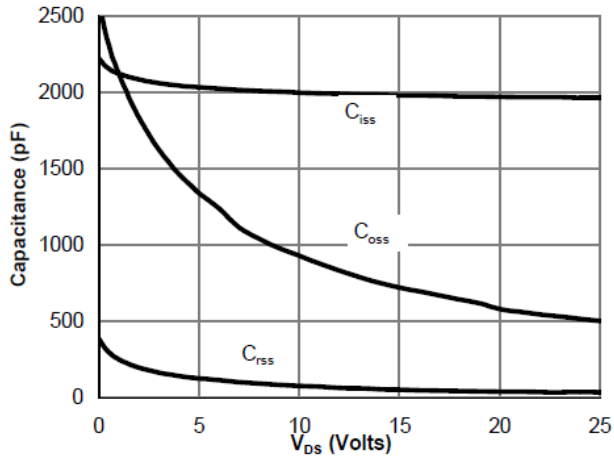
Drain-Source Diode Characteristics and Maximum Ratings

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

SFTN7210MP

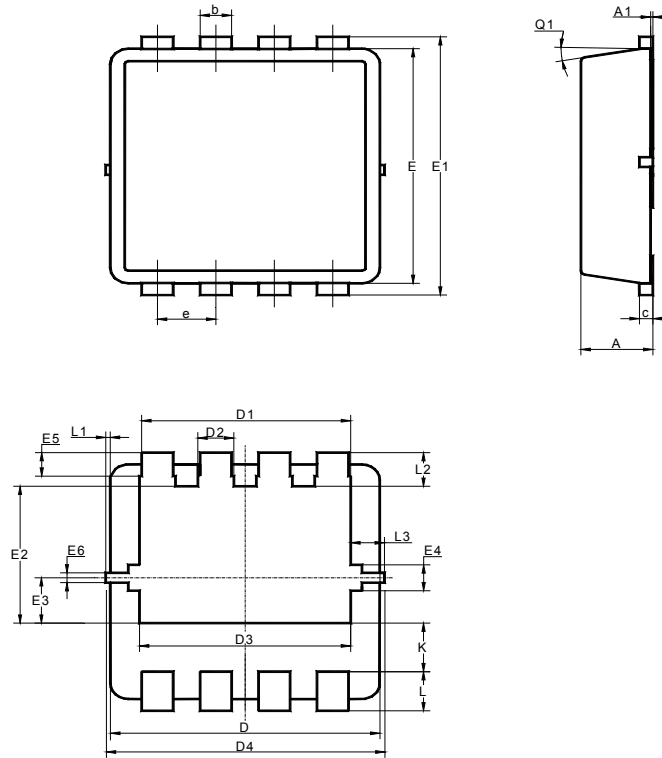


SFTN7210MP



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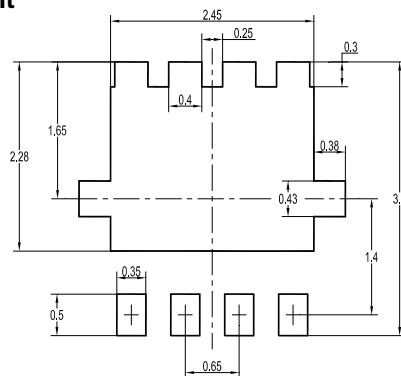
DFN3030 Package Outline Dimensions (Units: mm)



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
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Dated: 21/08/2017