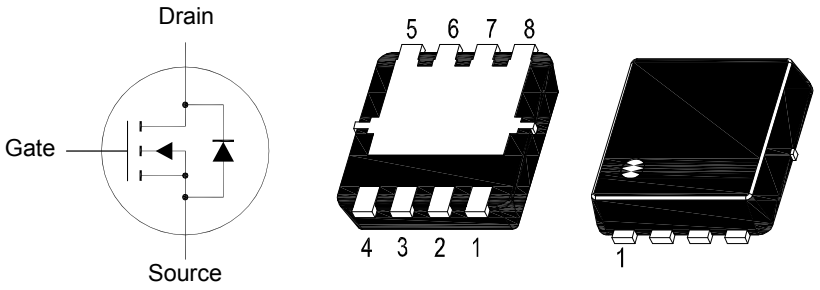
SFTN3005MP

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
Continuous Drain Current [1)]	T_A = 25℃ T_A = 70℃	I_D	14 14	A
Drain Current - Pulsed (t = 300 μs)		I_{DM}	35	A
Power Dissipation	T_A = 25℃ T_A = 70℃	P_D	3.2 2.1	W
Operating Junction and Storage Temperature Range		T_j, T_{stg}	- 55 to + 150	℃

Thermal Characteristics

Parameter		Symbol	Max.	Unit
Thermal Resistance from Junction to Ambient [2)]	Steady State	$R_{\theta JA}$	39	℃/W
Thermal Resistance from Junction to Case [2)]	Steady State	$R_{\theta JC}$	8	℃/W

[2)] The maximum current rating is limited by package.

[3)] RθJA is the sum of the junction-to-case and case-to-ambient thermal resistance where the case thermal reference is defined as the solder mounting surface of the drain pins. RθJC is guaranteed by design while RθCA is determined by the user's board design. RθJA shown below for single device operation on FR-4 in still air

Winning Team
互創國際

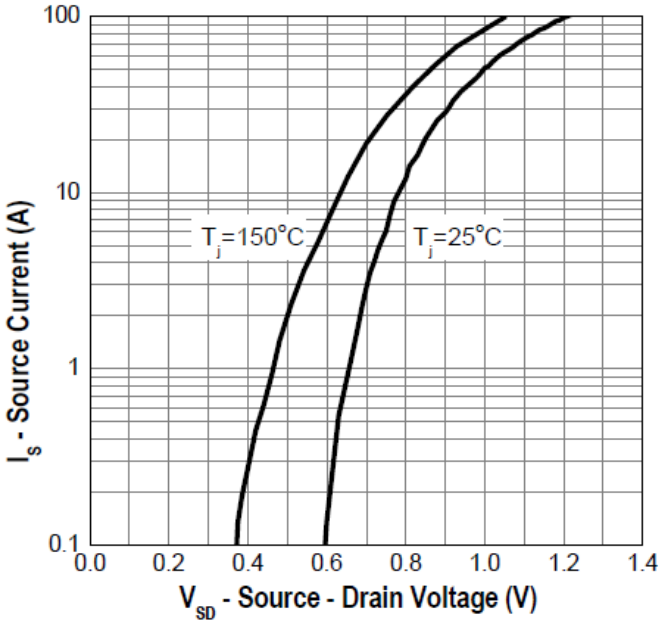
Dated: 01/06/2017

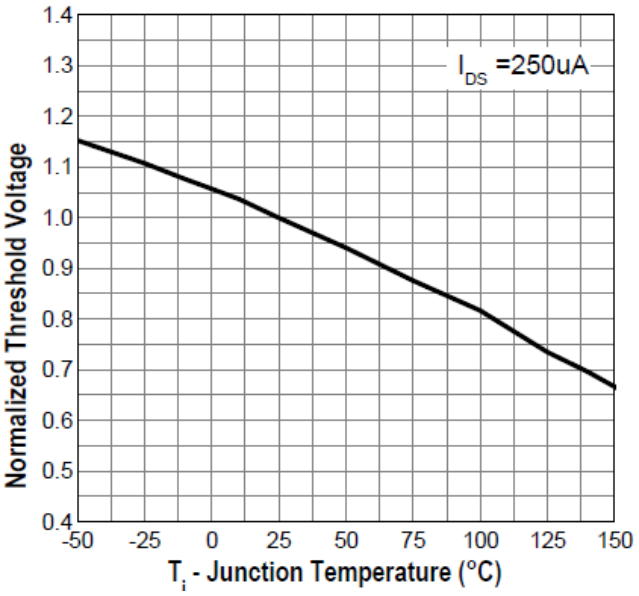
Characteristics at T_j = 25℃ unless otherwise specified

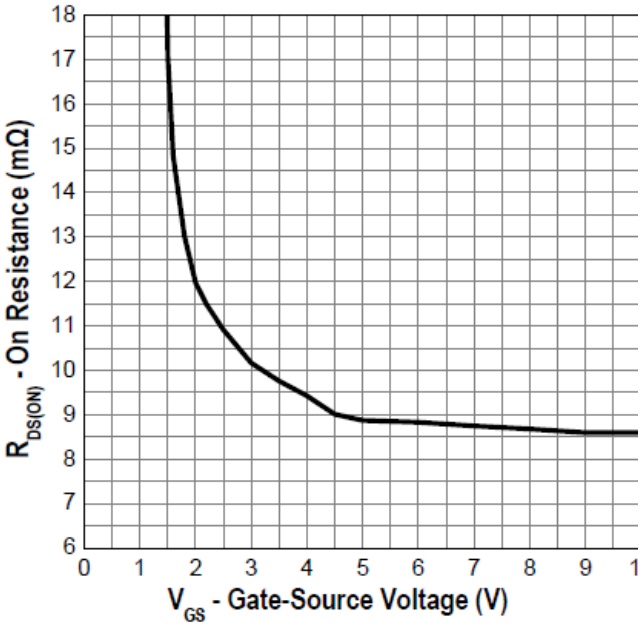
Parameter	Symbol	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage at I_{DS} = 250 μA	BV_{DSS}	30	-	-	V
Gate-Source Threshold Voltage at $V_{DS} = V_{GS}$, I_D = 250 uA	$V_{GS(th)}$	1.2	-	2.5	V
Drain-Source Leakage Current at V_{DS} = 30 V	I_{DSS}	-	-	1	μA
Gate-Source Leakage Current at V_{GS} = ± 20 V	I_{GSS}	-	-	± 100	nA
Drain-Source On-State Resistance at V_{GS} = 10 V, I_{DS} = 8 A	$R_{DS(on)}$	-	-	9.6	mΩ
Drain-Source On-State Resistance at V_{GS} = 4.5 V, I_{DS} = 7 A	$R_{DS(on)}$	-	-	13.2	mΩ
Forward Transconductance (t= 300 μs) at V_{DS} = 15 V, I_D = 7.8 A	g_{FS}	-	17	-	S
Input Capacitance at V_{GS} = 0 V, V_{DS} = 15 V, f = 1 MHz	C_{iss}	-	415	-	pF
Output Capacitance at V_{GS} = 0 V, V_{DS} = 15 V, f = 1 MHz	C_{oss}	-	90	-	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_{DD} = 15 V, V_{GEN} = 4.5 V, R_L = 2.4 Ω, R_g = 1 Ω, $I_D \approx$ 6.3 A	$t_{d(on)}$	-	13	-	ns
Turn-On Rise Time at V_{DD} = 15 V, V_{GEN} = 4.5 V, R_L = 2.4 Ω, R_g = 1 Ω, $I_D \approx$ 6.3 A	t_r	-	10	-	ns
Turn-Off Delay Time at V_{DD} = 15 V, V_{GEN} = 4.5 V, R_L = 2.4 Ω, R_g = 1 Ω, $I_D \approx$ 6.3 A	t_{off}	-	11	-	ns
Turn-Off Fall Time at V_{DD} = 15 V, V_{GEN} = 4.5 V, R_L = 2.4 Ω, R_g = 1 Ω, $I_D \approx$ 6.3 A	t_f	-	8	-	ns

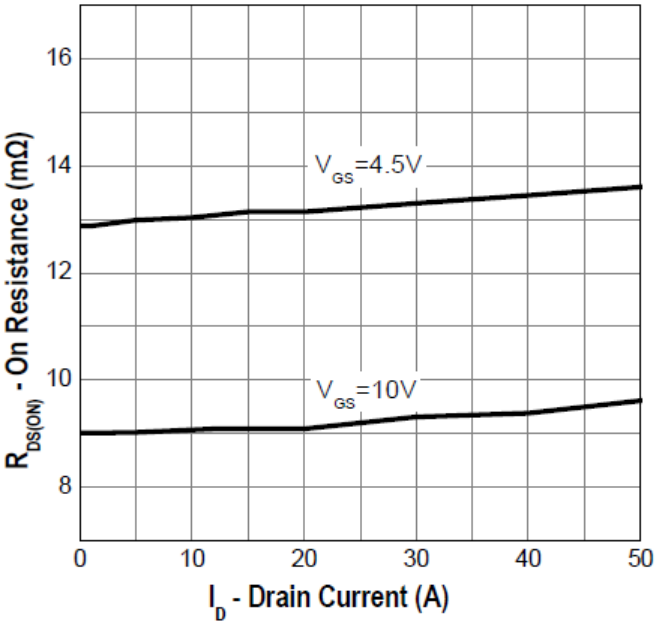
Drain-Source Diode Characteristics and Maximum Ratings

Parameter	Symbol	Max.	Unit
Drain-Source Diode Forward Voltage at V_{GS} = 0 V, I_S = 7.8 A	V_{SD}	1.3	V
Source-drain current	I_S	14	A







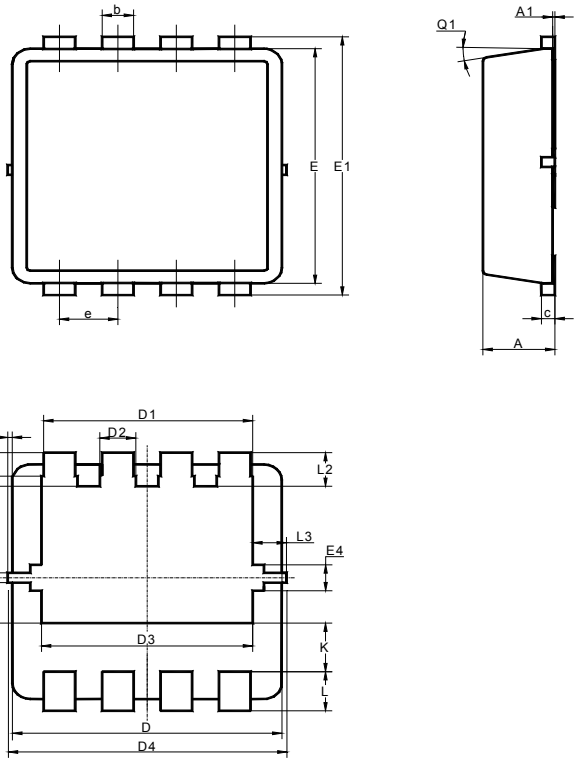


Winning Team
互創國際

Dated: 01/06/2017

SFTN3005MP

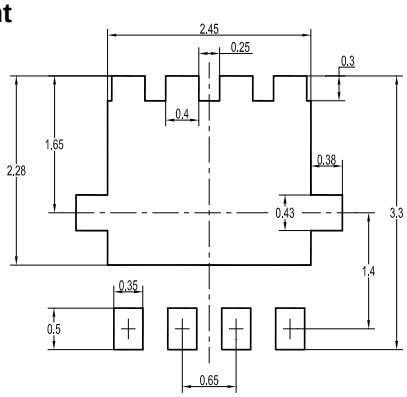
DFN3030 Package Outline Dimensions (Units: mm)



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: 01/06/2017