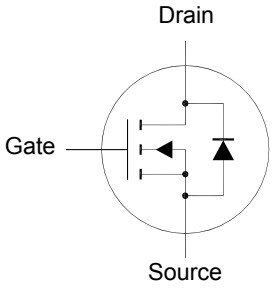
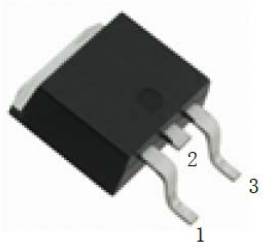
SFTN60AR

N-Channel Enhancement Mode MOSFET

Features

- High voltage power MOSFET
- Fast switching capability





1.Gate 2.Drain 3.Source

TO-252 Plastic Package

Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	600	V
Gate-Source Voltage	V_{GS}	± 30	V
Drain Current	I_D	2	A
Peak Drain Current[1)]	I_{DM}	8	A
Power Dissipation T_C = 25℃	P_D	44	W
Operating Junction and Storage Temperature Rang	T_J, T_{stg}	- 55 to + 150	℃

[1)] Repetitive Rating : Pulse width limited by T_J.

Thermal Characteristics

Parameter	Symbol	Max.	Unit
Maximum Thermal Resistance from Juntion to Case	$R_{\theta JC}$	2.87	℃/W
Maximum Thermal Resistance from Juntion to Ambient	$R_{\theta JA}$	100	℃/W

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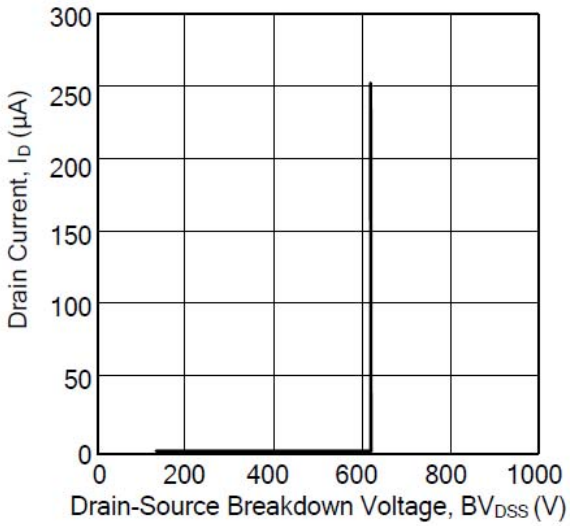
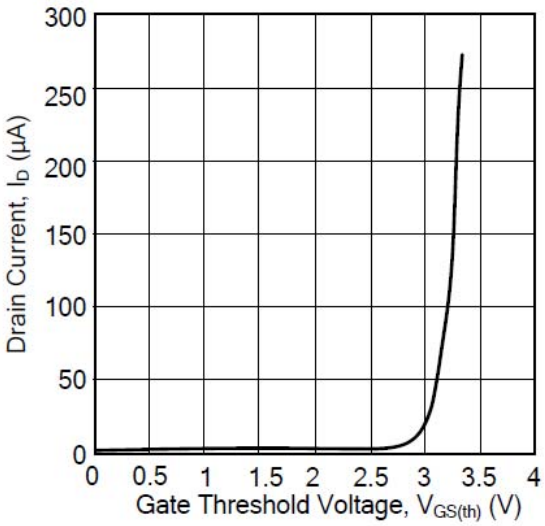
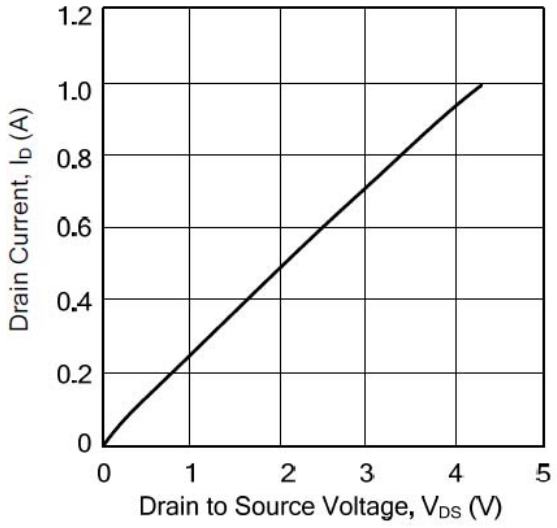
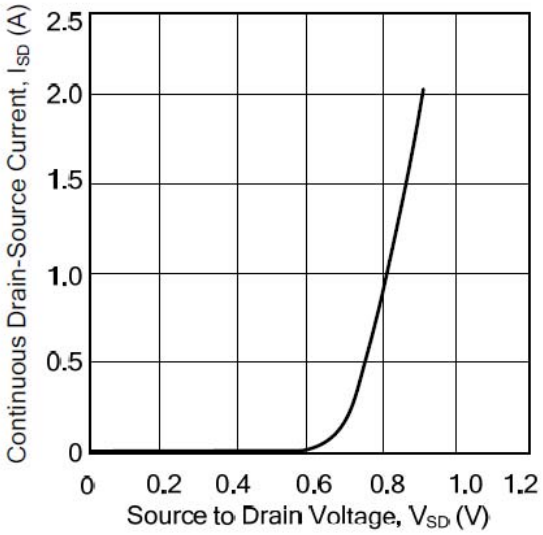
Characteristics at T_j = 25℃ unless otherwise specified

Parameter	Symbol	Min.	Max.	Unit
Drain-Source Breakdown Voltage at I_D = 250 μA	BV_{DSS}	600	-	V
Gate-Source Threshold Voltage at V_{DS} = V_{GS}, I_D = 250 uA	$V_{GS(th)}$	2	4	V
Drain-Source Leakage Current at V_{GS} = 600 V at V_{DS} = 480 V, T_C = 125℃	I_{DSS}	- -	10 100	μA
Gate Leakage Current at V_{GS} = ± 30 V	I_{GSS}	-	± 100	nA
Drain-Source On-State Resistance at V_{GS} = 10 V, I_D = 1 A	$R_{DS(on)}$	-	5	Ω
Diode Forward Voltage at I_S = 2 A, V_{GS}= 0 V	V_{SD}	-	1.4	V
Input Capacitance at V_{GS} = 0 V,V_{DS} = 25 V, f = 1 MHz	C_{iss}	-	350	pF
Output Capacitance at V_{GS} = 0 V,V_{DS} = 25 V, f = 1 MHz	C_{oss}	-	50	pF
Reverse Transfer Capacitance at V_{GS} = 0 V,V_{DS} = 25 V, f = 1 MHz	C_{rss}	-	13	pF
Turn-On Delay Time at I_D = 2.4 A, V_{DS} = 300 V, R_G= 25 Ω	t_{on}	-	60	ns
Turn-On Rise Time at I_D = 2.4 A, V_{DS} = 300 V, R_G= 25 Ω	t_r	-	55	ns
Turn-Off Delay Time at I_D = 2.4 A, V_{DS} = 300 V, R_G= 25 Ω	t_{off}	-	120	ns
Turn-Off Fall Time at I_D = 2.4 A, V_{DS} = 300 V, R_G= 25 Ω	t_f	-	60	ns

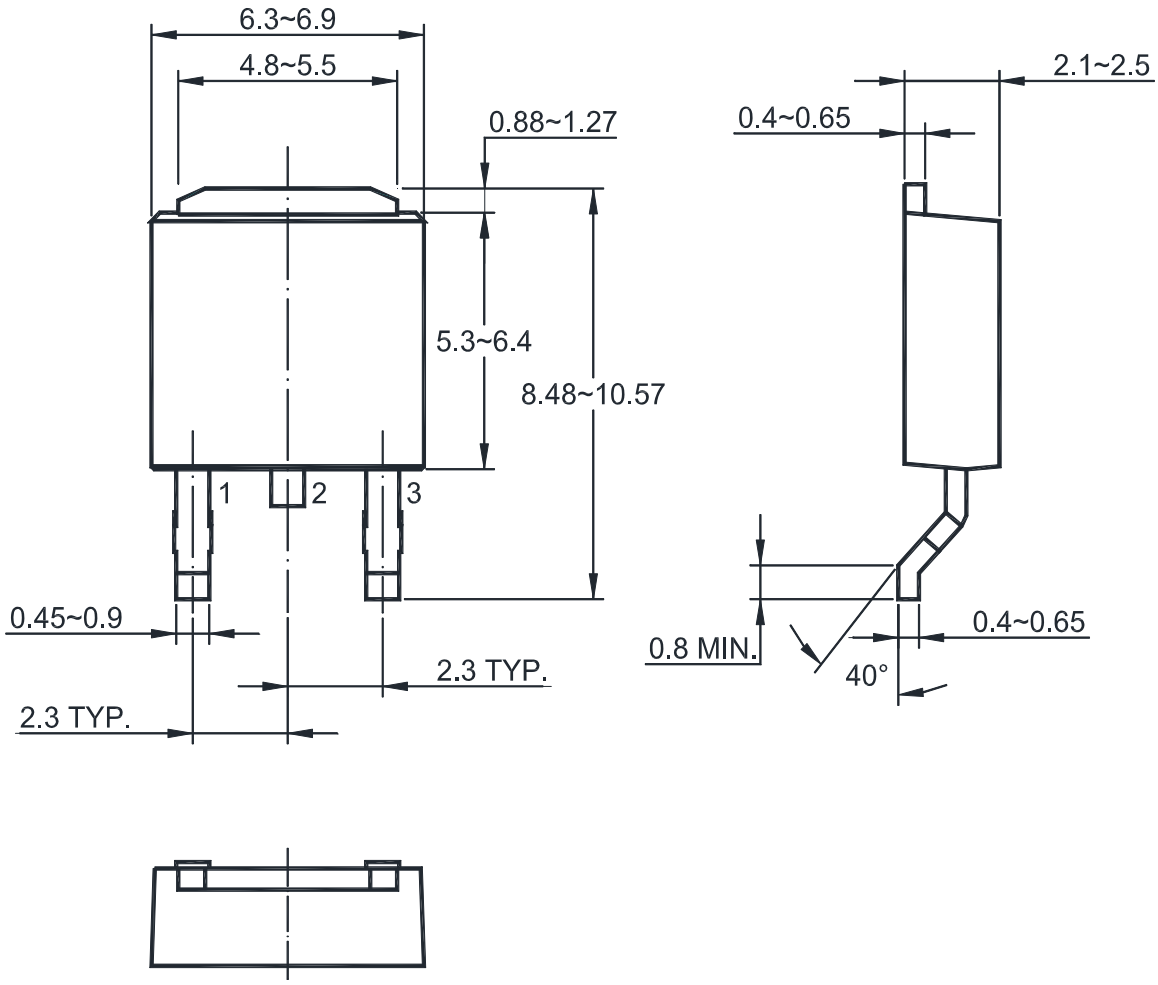

Drain Current, I_D (μA)
300
250
200
150
100
50
0
0
200
400
600
800
1000
Drain-Source Breakdown Voltage, BV_{DSS} (V)


Drain Current, I_D (μA)
300
250
200
150
100
50
0
0
0.5
1
1.5
2
2.5
3
3.5
4
Gate Threshold Voltage, $V_{GS(th)}$ (V)

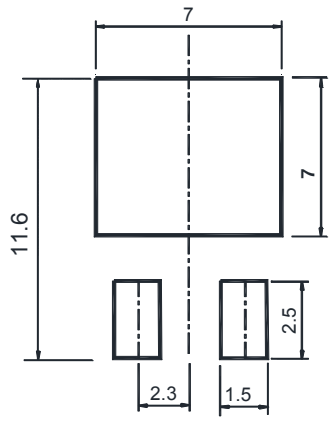

Drain Current, I_D (A)
1.2
1.0
0.8
0.6
0.4
0.2
0
0
1
2
3
4
5
Drain to Source Voltage, V_{DS} (V)


Continuous Drain-Source Current, I_{SD} (A)
2.5
2.0
1.5
1.0
0.5
0
0
0.2
0.4
0.6
0.8
1.0
1.2
Source to Drain Voltage, V_{SD} (V)

TO-252 PACKAGE OUTLINE



Recommended Soldering Footprint



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