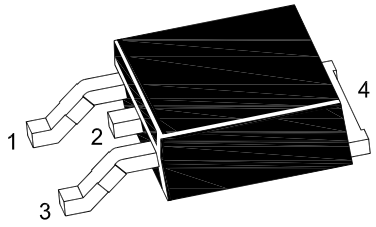
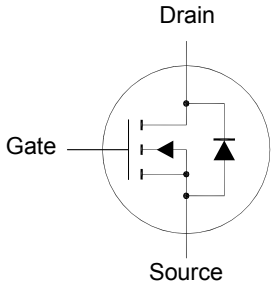
SFTN60R

N-Channel Enhancement Mode MOSFET



1. Gate 2. Drain 3. Source 4. Drain
TO-252 Plastic Package



Absolute Maximum Ratings

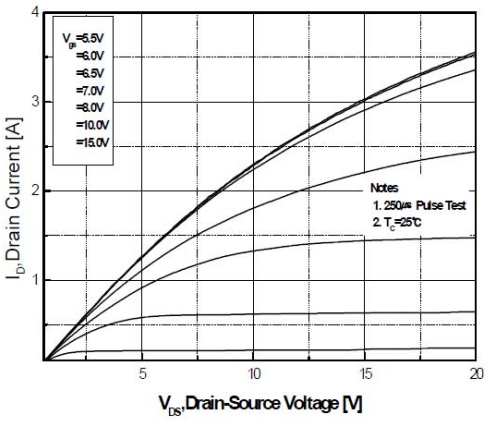
Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	600	V
Gate-Source Voltage	V_{GS}	± 30	V
Drain Current T_C = 25℃ T_C = 100℃	I_D	1.9 1.2	A
Peak Drain Current	I_{DM}	7.6	A
Power Dissipation T_C = 25℃	P_D	42	W
Operating Junction and Storage Temperature Range	T_J, T_{stg}	- 55 to + 150	℃

Thermal Characteristics

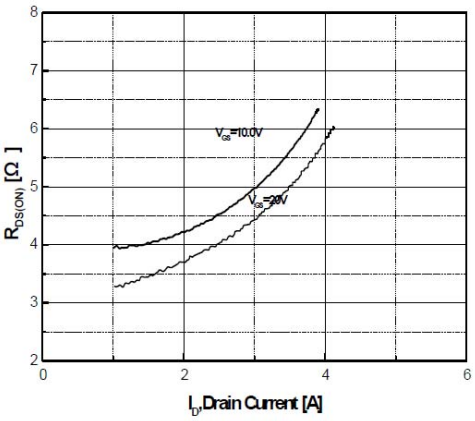
Parameter	Symbol	Max.	Unit
Maximum Thermal Resistance from Juntion to Case	$R_{\theta JC}$	2.98	℃/W
Maximum Thermal Resistance from Juntion to Ambient	$R_{\theta JA}$	110	℃/W

Characteristics at T_a = 25℃

Parameter	Symbol	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage at I_D = 250 μA	BV_{DSS}	600	-	-	V
Drain-Source Leakage Current at V_{DS} = 600 V	I_{DSS}	-	-	1	μA
Gate Leakage Current at V_{GS} = ± 30 V	I_{GSS}	-	-	100	nA
Gate-Source Threshold Voltage at V_{DS} = V_{GS}, I_D = 250 uA	$V_{GS(th)}$	3	-	5	V
Drain-Source On-State Resistance at V_{GS} = 10 V, I_D = 0.95 A	$R_{DS(on)}$	-	-	4.5	Ω
Forward Transconductance at V_{DS} = 30 V, I_D = 1 A	g_{FS}	-	0.5	-	S
Diode Forward Voltage at I_S = 1.9 A, V_{GS}= 0 V	V_{SD}	-	-	1.4	V
Maximun Body-Diode Continuous Current	I_S	-	4.6	-	A
Input Capacitance at V_{GS} = 0 V, V_{DS} = 25 V, f = 1 MHz	C_{iss}	-	-	360	pF
Output Capacitance at V_{GS} = 0 V, V_{DS} = 25 V, f = 1 MHz	C_{oss}	-	-	2	pF
Reverse Transfer Capacitance at V_{GS} = 0 V, V_{DS} = 25 V, f = 1 MHz	C_{rss}	-	-	40	pF
Turn-On Delay Time at I_D = 2 A, V_{GS} = 10 V, V_{DS} = 300 V, R_G= 25 Ω	$t_{d(on)}$	-	10.6	-	ns
Turn-On Rise Time at I_D = 2 A, V_{GS} = 10 V, V_{DS} = 300 V, R_G= 25 Ω	t_r	-	29.6	-	ns
Turn-Off Delay Time at I_D = 2 A, V_{GS} = 10 V, V_{DS} = 300 V, R_G= 25 Ω	$t_{d(off)}$	-	40.4	-	ns
Turn-Off Fall Time at I_D = 2 A, V_{GS} = 10 V, V_{DS} = 300 V, R_G= 25 Ω	t_f	-	38.4	-	ns

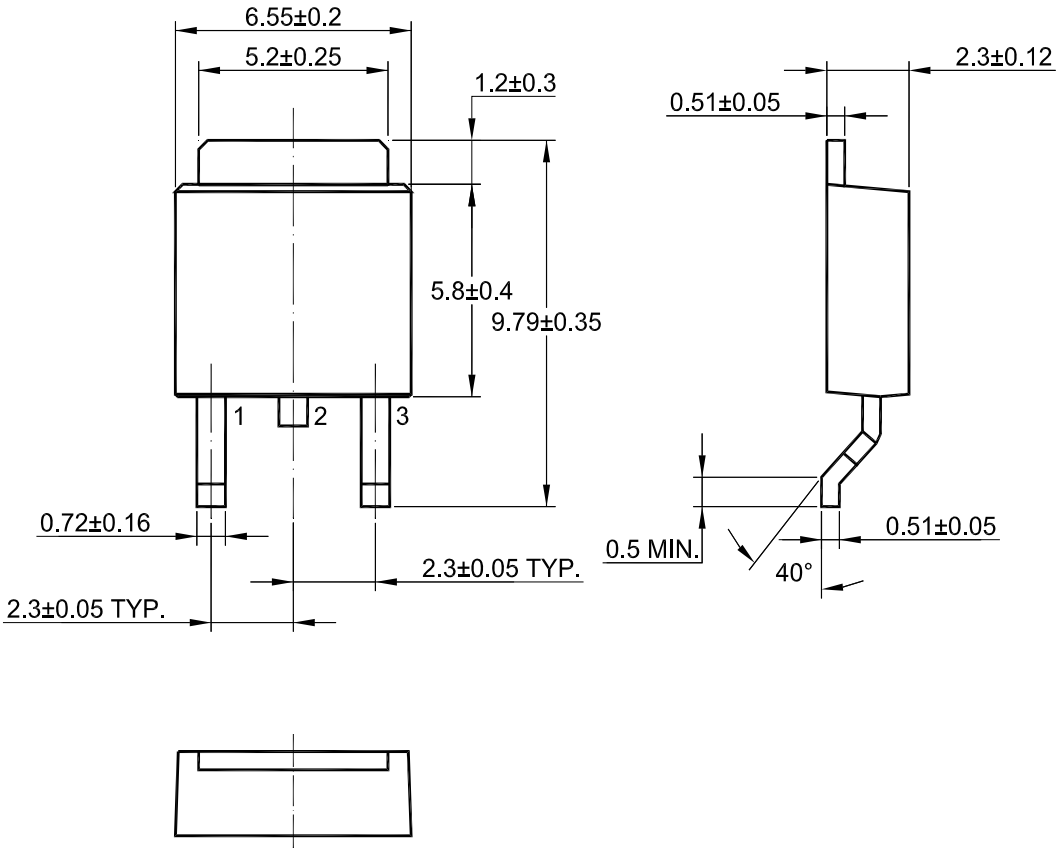


On-Region Characteristics



On-Resistance Variation with Drain Current and Gate Voltage

TO-252 PACKAGE OUTLINE



Dimensions in mm