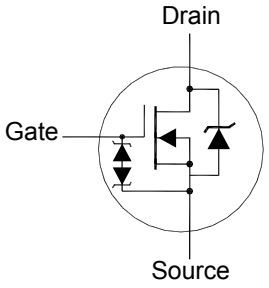
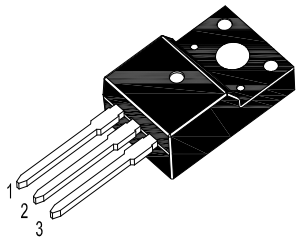
SFTN2580

N-Channel Enhancement Mode Power MOSFET





TO-220F Plastic Package
1.Gate 2.Drain 3.Source

Absolute Maximum Ratings

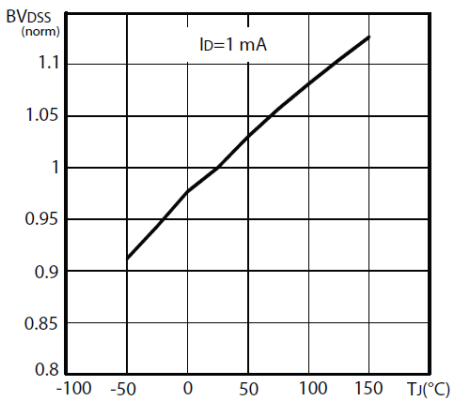
Parameter		Symbol	Value	Unit
Drain-Source Voltage		V_{DS}	800	V
Gate-Source Voltage		V_{GS}	± 30	V
Drain Current	T_C = 25℃ T_C = 100℃	I_D	19.5 12.3	A
Peak Drain Current		I_{DM}	78	A
Power Dissipation	T_C = 25℃	P_{tot}	40	W
Operating Junction and Storage Temperature Range		T_J, T_{stg}	- 55 to + 150	℃

Thermal Characteristics

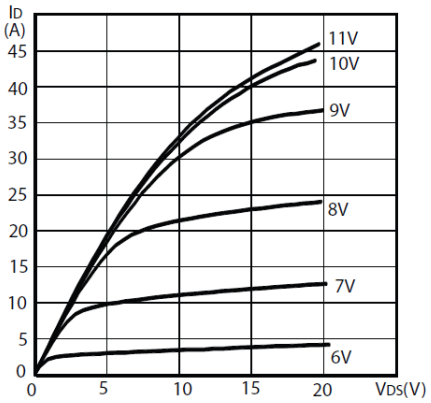
Parameter	Symbol	Max.	Unit
Maximum Thermal Resistance from Juntion to Case	$R_{\theta JC}$	3.1	℃/W
Maximum Thermal Resistance from Juntion to Ambient	$R_{\theta JA}$	62.5	℃/W

Characteristics at T_C = 25℃ unless otherwise specified

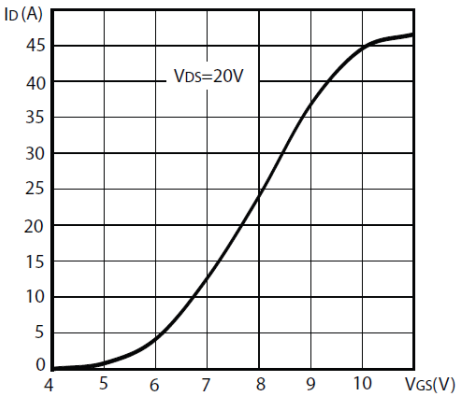
Parameter	Symbol	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage at I_D = 1 mA	BV_{DSS}	800	-	-	V
Drain-Source Leakage Current at V_{DS} = 800 V at V_{DS} = 800 V, T_C = 125℃	I_{DSS}	- -	- -	1 50	μA
Gate Leakage Current at V_{GS} = ± 20 V	I_{GSS}	-	-	± 10	μA
Gate-Source Threshold Voltage at V_{DS} = V_{GS}, I_D = 100 μA	$V_{GS(th)}$	3	-	5	V
Drain-Source On-State Resistance at V_{GS} = 10 V, I_D = 10 A	$R_{DS(on)}$	-	-	0.26	Ω
Diode Forward Voltage at I_S = 19.5 A, V_{GS}= 0 V	V_{SD}	-	-	1.5	V
Maximun Body-Diode Continuous Current	I_S	-	-	19.5	A
Input Capacitance at V_{GS} = 0 V, V_{DS} = 100 V, f = 1 MHz	C_{iss}	-	1600	-	pF
Output Capacitance at V_{GS} = 0 V, V_{DS} = 100 V, f = 1 MHz	C_{oss}	-	130	-	pF
Reverse Transfer Capacitance at V_{GS} = 0 V, V_{DS} = 100 V, f = 1 MHz	C_{rss}	-	2	-	pF
Turn-On Delay Time at I_D = 10 A, V_{DD} = 400 V, V_{GS} = 10 V, R_G= 4.7 Ω	$t_{d(on)}$	-	25	-	ns
Turn-On Rise Time at I_D = 10 A, V_{DD} = 400 V, V_{GS} = 10 V, R_G= 4.7 Ω	t_r	-	13	-	ns
Turn-Off Delay Time at I_D = 10 A, V_{DD} = 400 V, V_{GS} = 10 V, R_G= 4.7 Ω	$t_{d(off)}$	-	60	-	ns
Turn-Off Fall Time at I_D = 10 A, V_{DD} = 400 V, V_{GS} = 10 V, R_G= 4.7 Ω	t_f	-	15	-	ns



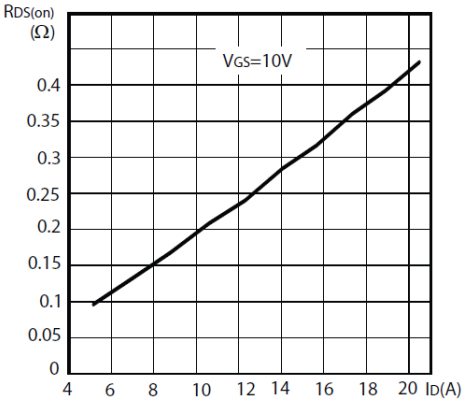
Normalized B_{VDSS} vs temperature



Output characteristics

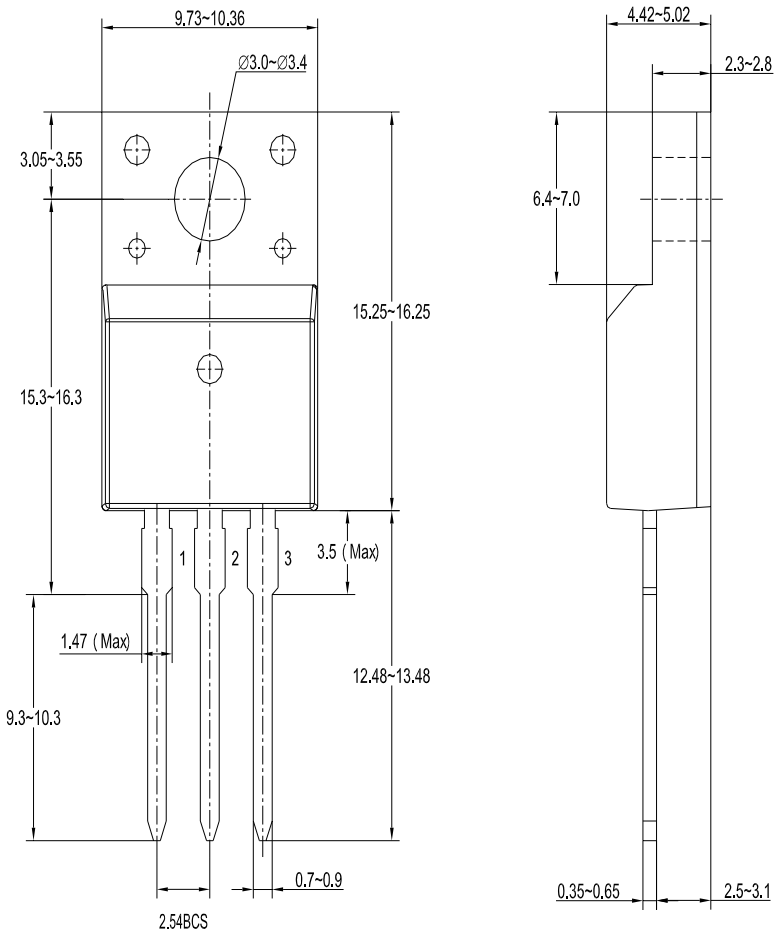


Transfer characteristics



Static drain-source on-resistance

TO-220F Package Outline



Dimensions in millimeters