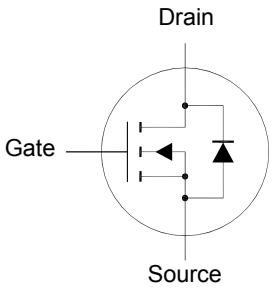
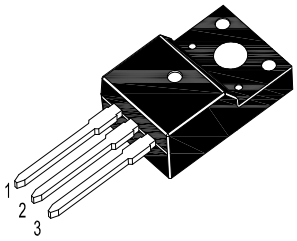
SFTN2906

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}	60	V
Gate-Source Voltage		V_{GS}	± 20	V
Drain Current at V_{GS} = 10 V	T_C = 25℃ T_C = 100℃	I_D	84 59	A
Peak Drain Current	T_C = 25℃	I_{DM}	336	A
Power Dissipation	T_C = 25℃	P_{tot}	38	W
Single Pulse Avalanche energy at I_D = 84 A , R_{GS} = 25 Ω		E_{AS}	140	mJ
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	$R_{\theta JC}$	3.9	K/W

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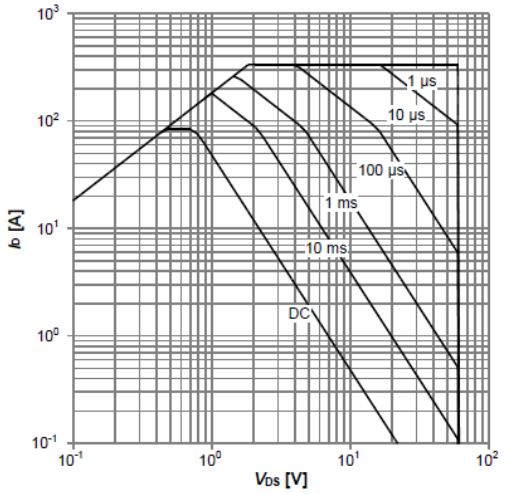
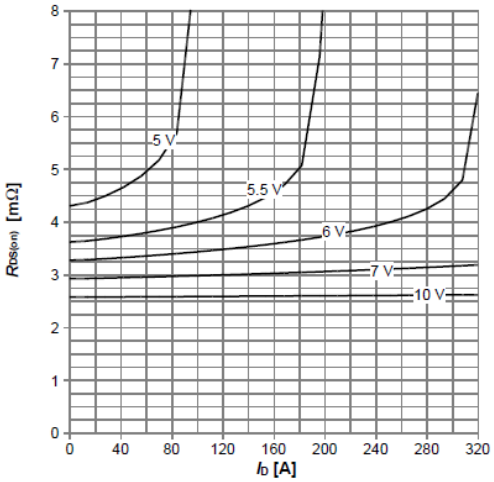
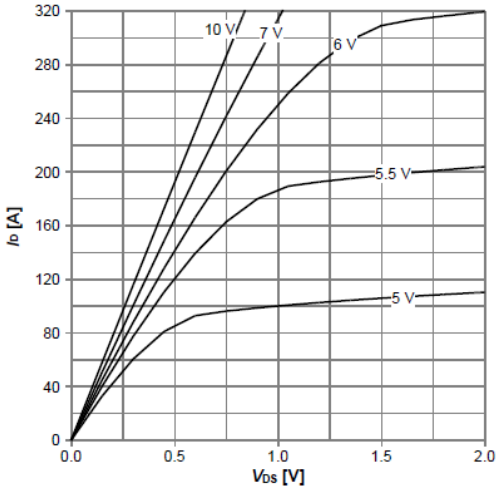
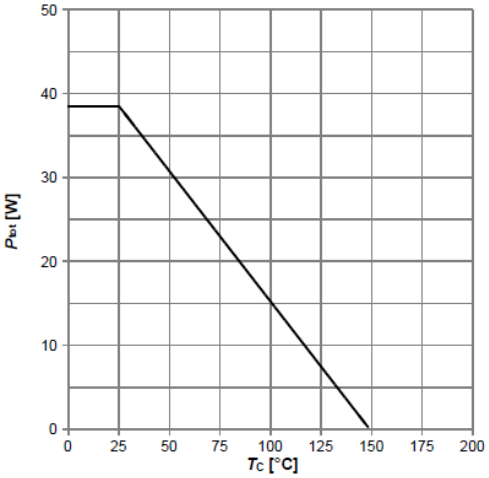
Characteristics at T_J = 25℃ unless otherwise specified

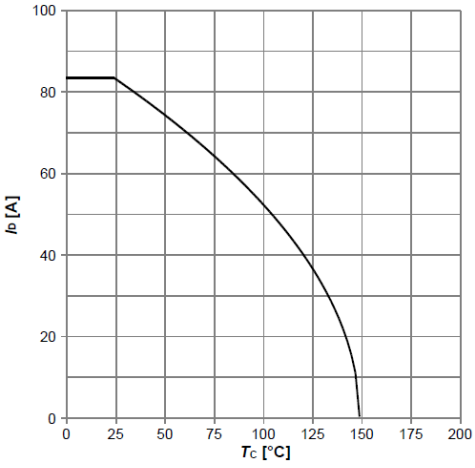
Parameter	Symbol	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage at I_D = 1 mA	BV_{DSS}	60	-	-	V
Drain-Source Leakage Current at V_{DS} = 60 V at V_{DS} = 60 V, T_J = 125℃	I_{DSS}	- -	- -	1 100	μA
Gate Leakage Current at V_{GS} = 20 V	I_{GSS}	-	-	100	nA
Gate-Source Threshold Voltage at V_{DS} = V_{GS}, I_D = 75 μA	$V_{GS(th)}$	2.1	-	3.3	V
Drain-Source On-State Resistance at V_{GS} = 10 V, I_D = 84 A at V_{GS} = 6 V, I_D = 21A	$R_{DS(on)}$	- -	- -	2.9 3.5	mΩ
Forward Transconductance at V_{DS}>2I_D*$R_{DS(on)max}$, I_D = 84 A	$\lvert g_{FS} \rvert$	75	150	-	S
Diode Forward Voltage at I_F = 32 A, V_{GS}= 0 V	V_{SD}	-	-	1.2	V
Input Capacitance at V_{GS} = 0 V, V_{DS} = 30 V, f = 1 MHz	C_{iss}	-	4100	-	pF
Output Capacitance at V_{GS} = 0 V, V_{DS} = 30 V, f = 1 MHz	C_{oss}	-	980	-	pF
Reverse Transfer Capacitance at V_{GS} = 0 V, V_{DS} = 30 V, f = 1 MHz	C_{rss}	-	39	-	pF
Turn-On Delay Time at I_D = 84 A, V_{DD} = 30 V, V_{GS} = 10 V, R_G = 3 Ω	$t_{d(on)}$	-	16	-	ns
Turn-On Rise Time at I_D = 84 A, V_{DD} = 30 V, V_{GS} = 10 V, R_G = 3 Ω	t_r	-	15	-	ns
Turn-Off Delay Time at I_D = 84 A, V_{DD} = 30 V, V_{GS} = 10 V, R_G = 3 Ω	$t_{d(off)}$	-	30	-	ns
Turn-Off Fall Time at I_D = 84 A, V_{DD} = 30 V, V_{GS} = 10 V, R_G = 3 Ω	t_f	-	11	-	ns

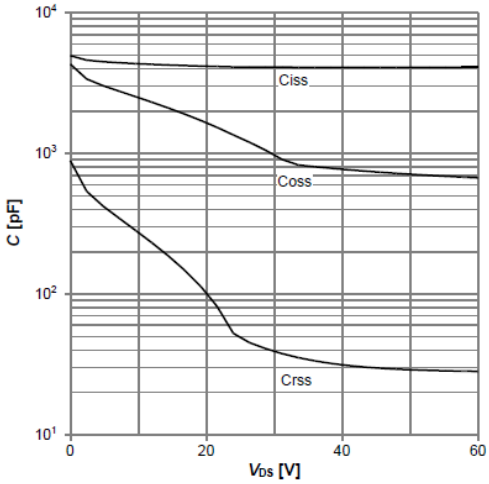












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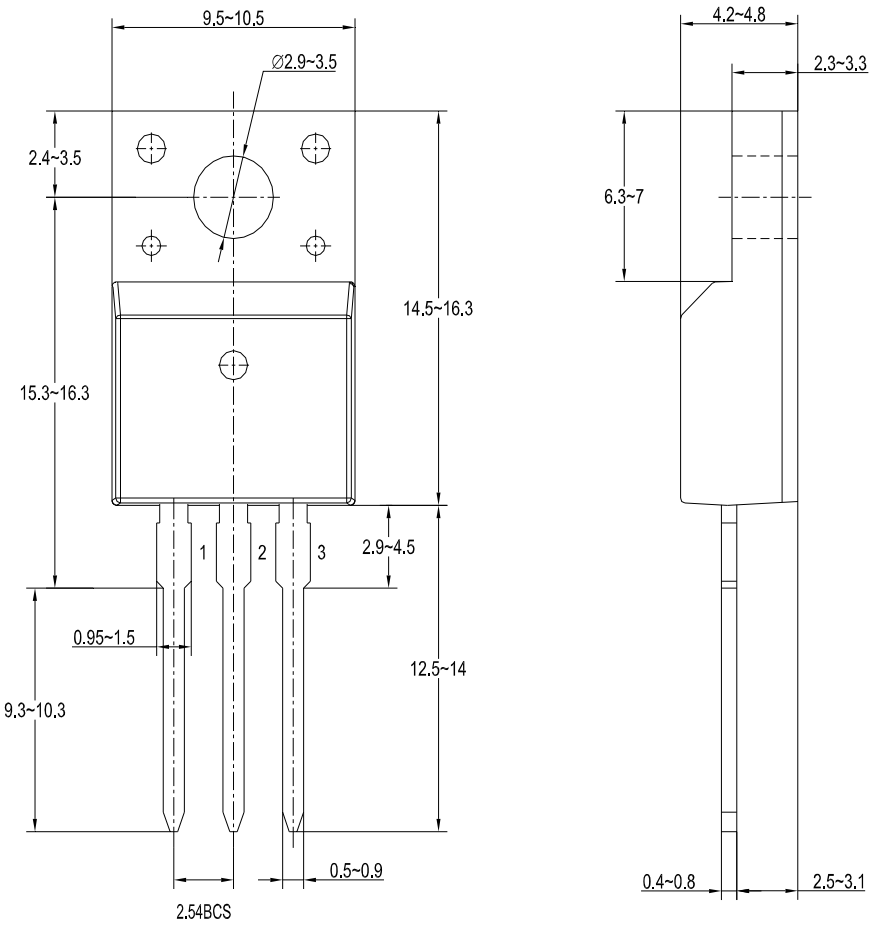
TO-220F Package Outline



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