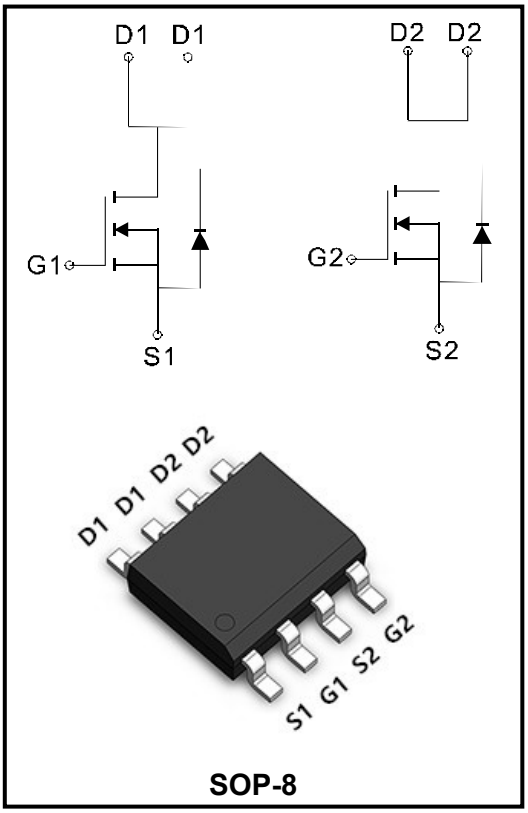
Dual N-Channel 17V (D-S) MOSFET

MAIN CHARACTERISTICS

I_D	6A
V_{DSS}	17V
R_{DSON}-typ(@V_{GS}=4.5V)	≦29mΩ
I_D	5.2A
V_{DSS}	17V
R_{DSON}-typ(@V_{GS}=2.5V)	≦42mΩ



SOP-8

APPLICATIONS

- Power Management in Note book
- Portable Equipment
- Battery Powered System
- Load Switch
- DSC

Product Specification Classification

Part Number	Package	Marking	Pack
YFW9926S	SOP-8	YFW 9926S XXXXX	3000PCS/Tape

Maximum Ratings (Ta=25°C Unless Otherwise Noted)

Parameter		Symbol	10sec		SteadyState		Unit
Drain-Source Voltage		V_{DSS}	17				V
Gate-Source Voltage		V_{GSS}	±8				V
Continuous Drain Current*	T_A=25°C	I_D	6.6		5.2		A
	T_A=70°C		5.2		4.2		
Pulsed Drain Current		I_{DM}	30				A
Maximum Power Dissipation*	T_A=25°C	P_D	2.0		1.25		W
	T_A=70°C		1.2		0.8		
Operating Junction Temperature		T_J	-55 to 150				°C
Thermal Resistance-Junction to Ambient*		$R_{\theta JA}$	Typ	45	Typ	80	°C/W
			Max	62.5	Max	100	

The *The device mounted on 1in^2 FR4 board with 2 oz copper

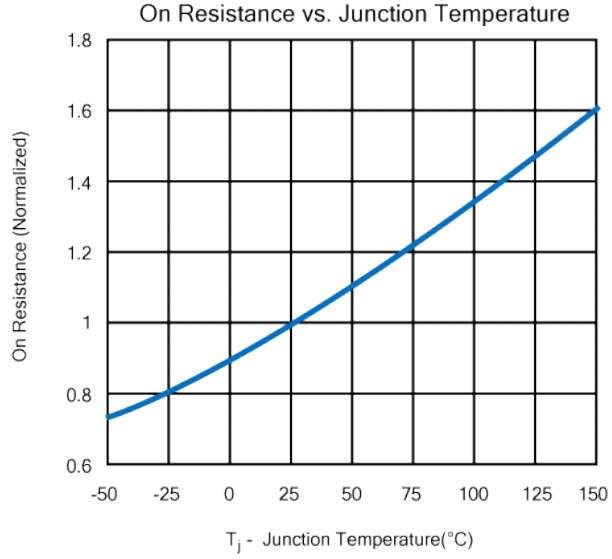
Symbol	Parameter	Limit	Min	Typ	Max	Unit
STATIC						
BV_{DSS}	Drain-Source Breakdown Voltage	V_{GS}=0, I_D=250/μA	17			V
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS}=V_{GS}) I_D=250/μA	0.4		1.2	V
I_{GSS}	Gate Body Leakage	V_{DS}=0V, V_{GS}=±8V			±100	nA
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS}=17V, V_{GS}=0V			1	μA
$R_{DS(ON)}$	Drain-Source On-Resistance	V_{GS}=4.5V, I_D=6.0A			29	mΩ
		V_{GS}=2.5V, I_D= 5.2A			42	
V_{SD}	Diode Forward Voltage	Is=1.7A, V_{GS}=0V			1.2	V
DYNAMIC						
Q_g	Total Gate Charge	V_{DS}=10V, V_{GS}=4.5V, I_D=6.0A		8		nC
Q_{gs}	Gate-Source Charge			2.1		
Q_{gd}	Gate-Drain Charge			2.3		
$t_{d(on)}$	Turn-On Delay Time	V_{DD}=10V,I_D=1.0A, V_{GEN}=4.5V R_G=6Ω		14		ns
tr	Turn-On Rise Time			17		
$t_{d(off)}$	Turn-Off Delay Time			43		
t_f	Turn-Off Fall Time			5		
Ciss	Input capacitance	V_{DS}=15V, V_{GS}=0V, f=1.0MHz		550		pF
Coss	Output Capacitance			130		
Crss	Reverse Transfer Capacitance			40		

Notes: a. Pulse test: pulse width ≦ 300us, duty cycle ≦ 2%,Guaranteed by design, not subject to production testing.

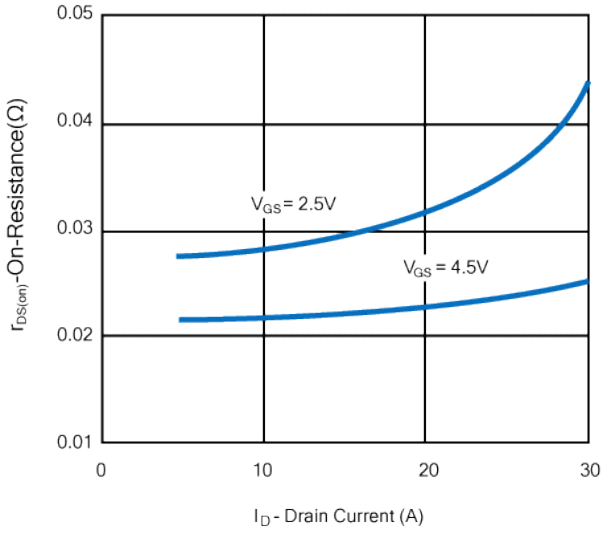
b.suchtech reserves the right to improve product design, functions and reliability without notice.

Typical Characteristics (T_J=25℃ Noted)

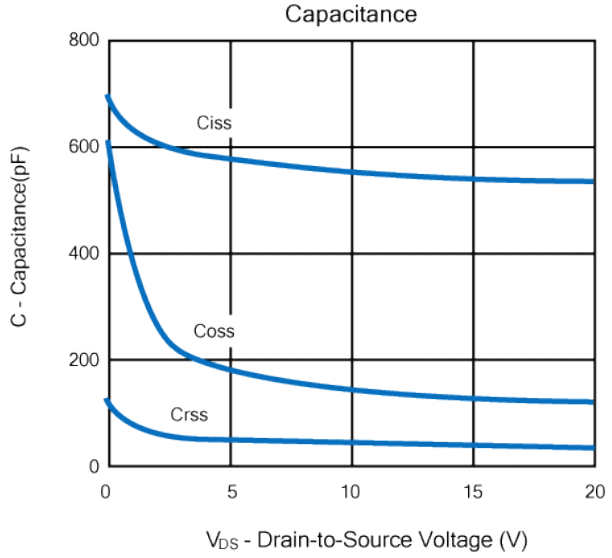
On Resistance vs. Junction Temperature



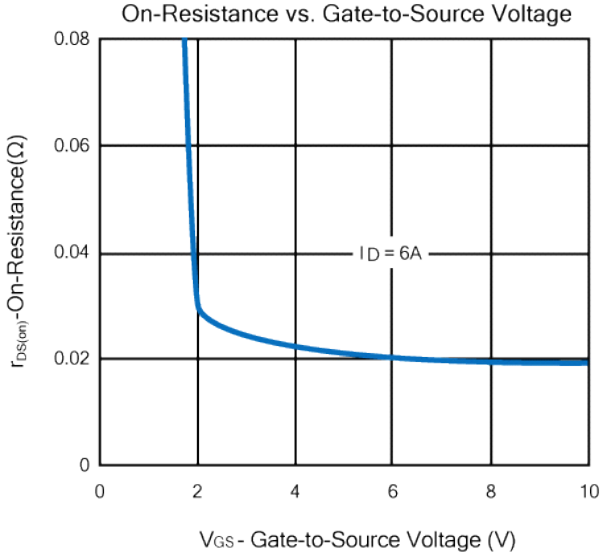
On-Resistance vs. Drain Current



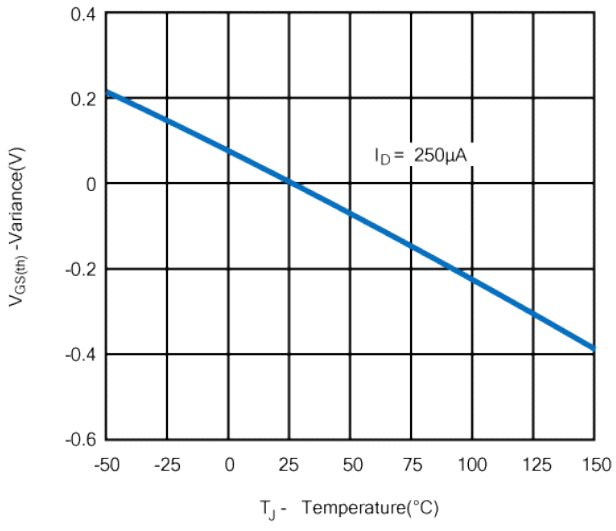
Capacitance



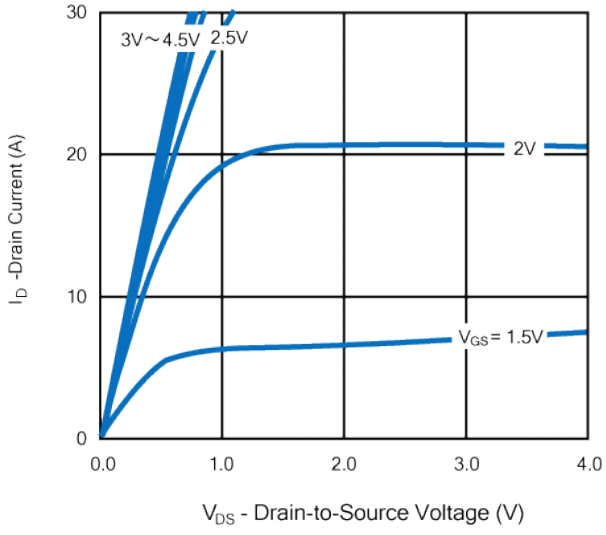
On-Resistance vs. Gate-to-Source Voltage



Threshold Voltage

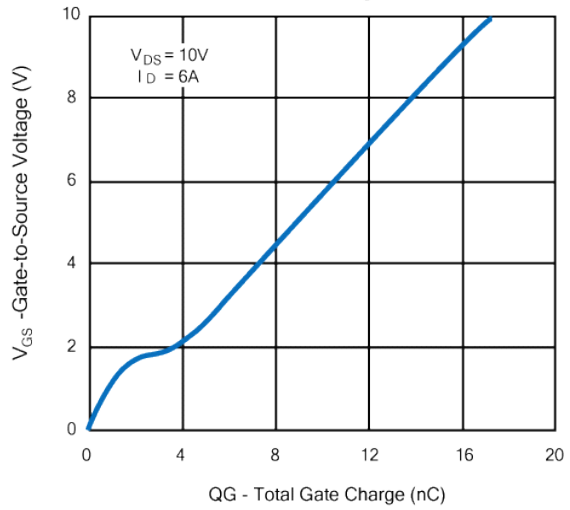


On-Region Characteristics

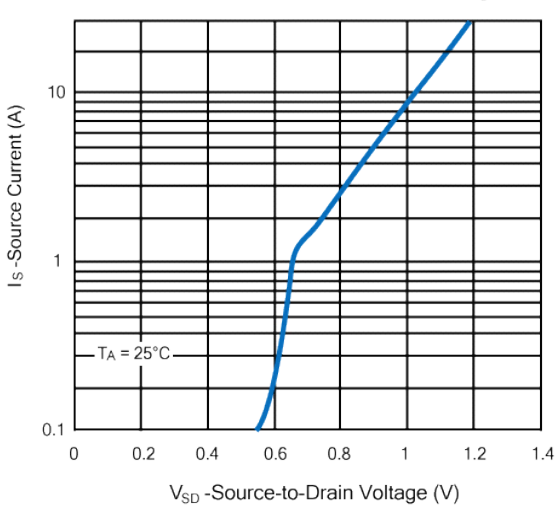


Typical Characteristics (T_J=25℃ Noted)

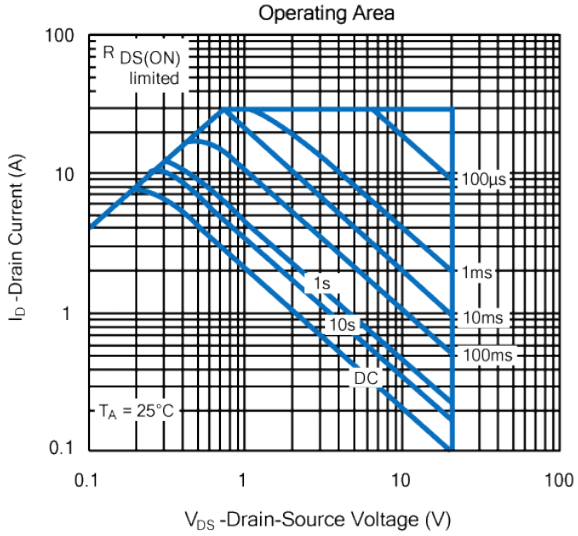
Gate Charge



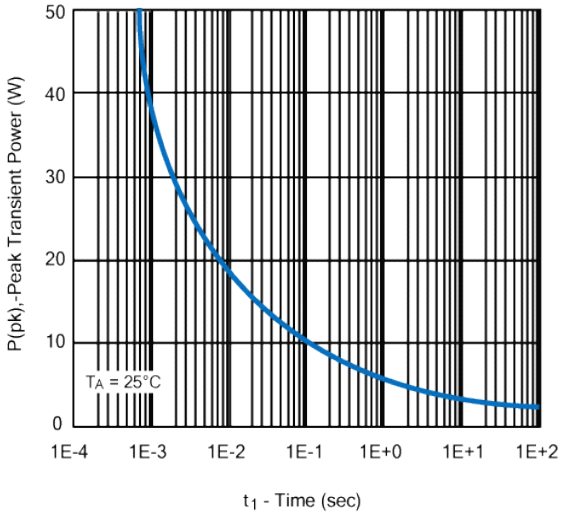
Source to Drain Diode Forward Voltage



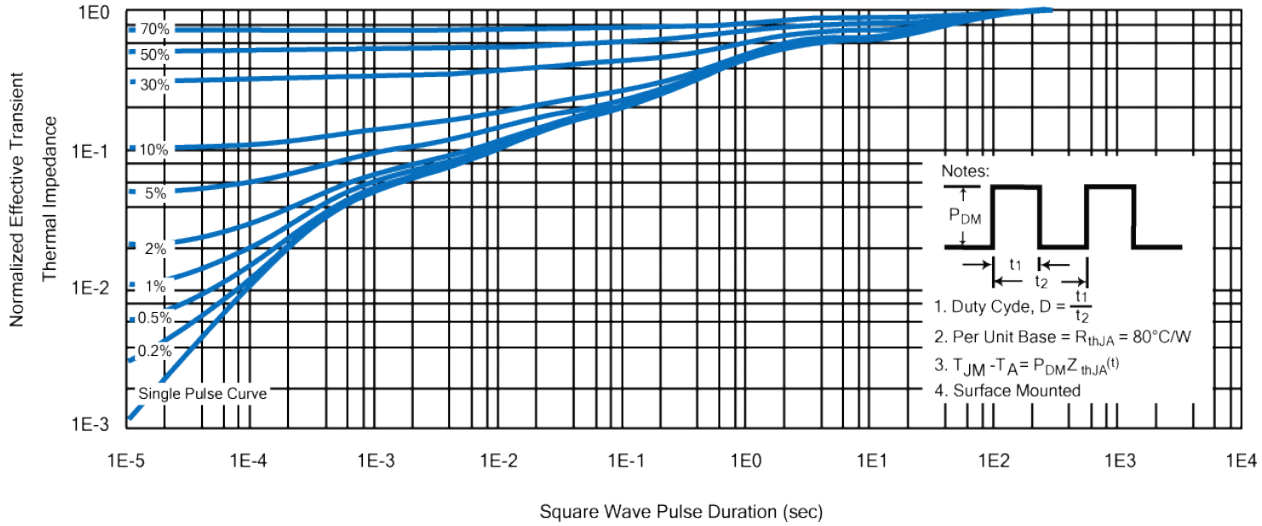
Maximum Forward Biased Safe Operating Area



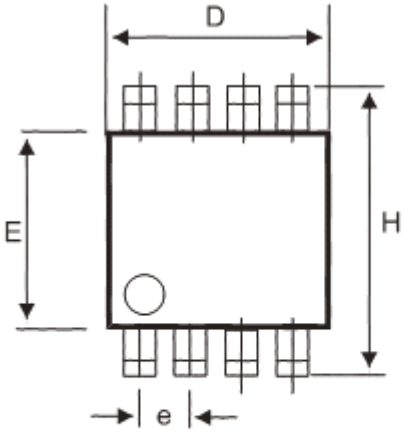
Single Pulse Maximum Power Dissipation

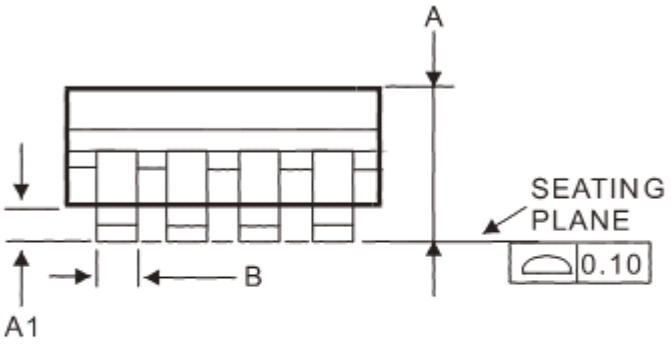


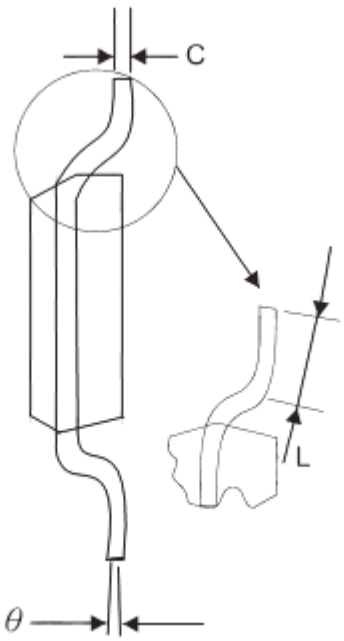
Normalized Thermal Transient Impedance, Junction-to-Ambient



Package Outline SOP-8







DIM	MILLIMETERS (mm)	
	MIN	MAX
A	1.35	1.75
A1	0.10	0.25
B	0.35	0.49
C	0.18	0.25
D	4.80	5.00
E	3.80	4.00
e	1.27 BSC	
H	5.80	6.20
L	0.40	1.25
θ	0°	7°

NNote: 1. Refer to JEDEC MS-012AA.

2. Dimension “D” does not include mold flash, protrusions or gate burrs . Mold flash, protrusions or gate burrs shall not exceed 0.15 mm per side.