

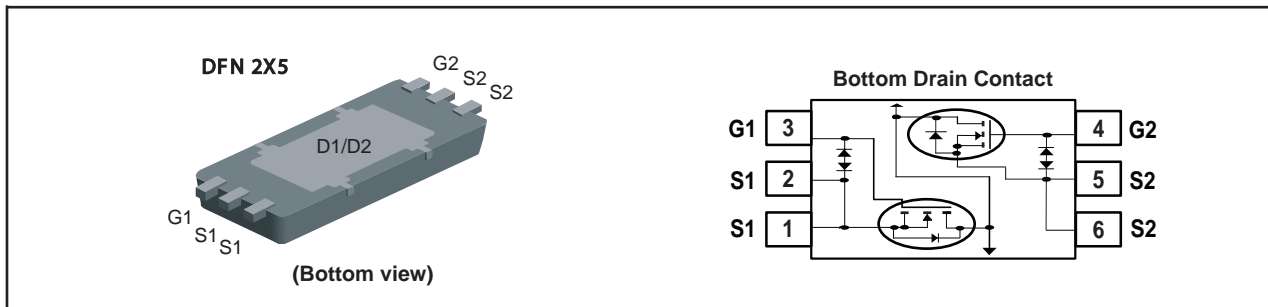


Dual N-Channel Enhancement Mode Field Effect Transistor

PRODUCT SUMMARY		
V _{DSS}	I _D	R _{DS(ON)} (mΩ) Max
20V	11A	8.5 @ V _{GS} =4.5V
		9.0 @ V _{GS} =4.0V
		9.5 @ V _{GS} =3.7V
		10.0 @ V _{GS} =3.1V
		11.5 @ V _{GS} =2.5V

FEATURES

- Super high dense cell design for low R_{DS(ON)}.
- Rugged and reliable.
- Surface Mount Package.
- ESD Protected.



ABSOLUTE MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

Symbol	Parameter	Limit	Units	
V _{DS}	Drain-Source Voltage	20	V	
V _{GS}	Gate-Source Voltage	±10	V	
I _D	Drain Current-Continuous ^{a c}	T _A =25°C	11	A
		T _A =70°C	8.8	A
I _{DM}	-Pulsed ^c	90	A	
P _D	Maximum Power Dissipation ^a	T _A =25°C	1.67	W
		T _A =70°C	1.07	W
T _J , T _{STG}	Operating Junction and Storage Temperature Range	-55 to 150	°C	

THERMAL CHARACTERISTICS

R _{θJA}	Thermal Resistance, Junction-to-Ambient	75	°C/W
R _{θJC}	Thermal Resistance, Junction-to-Case	5.5	°C/W

SP8256

Ver 1.1

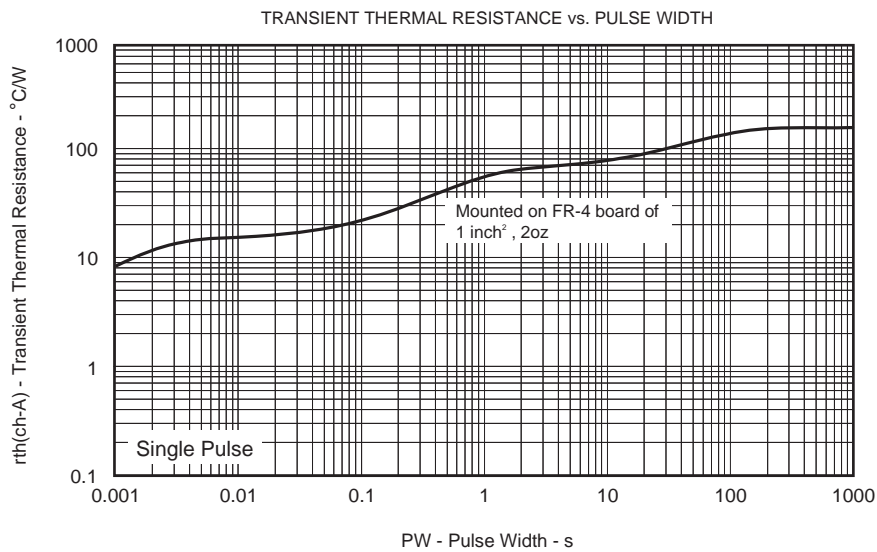
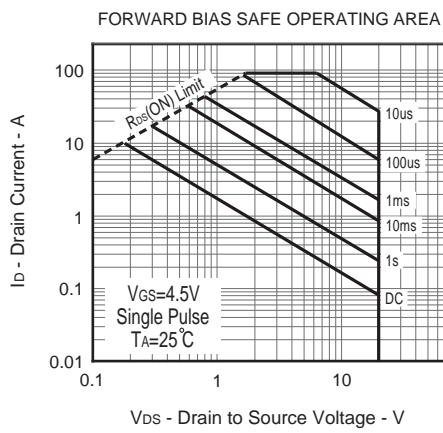
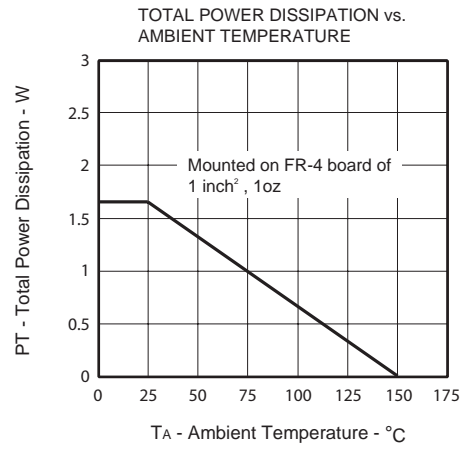
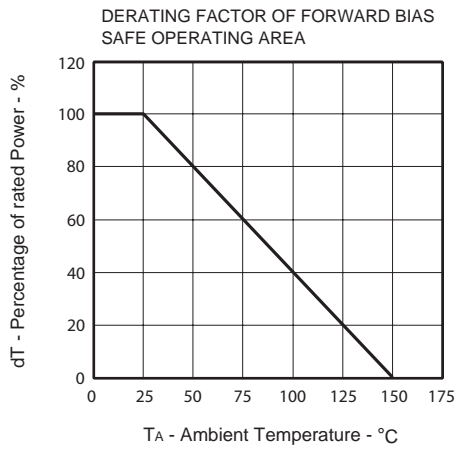
ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

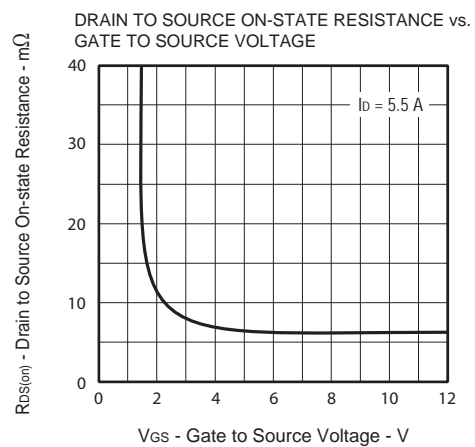
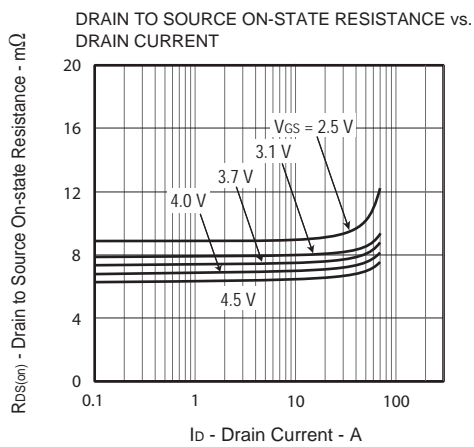
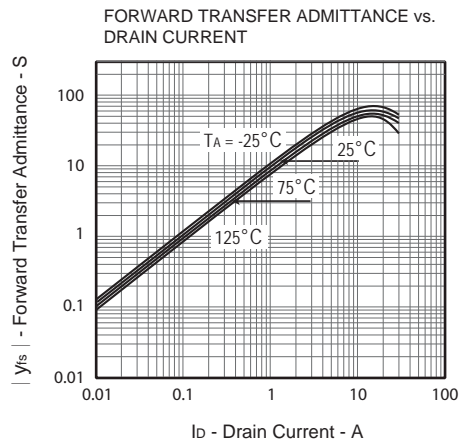
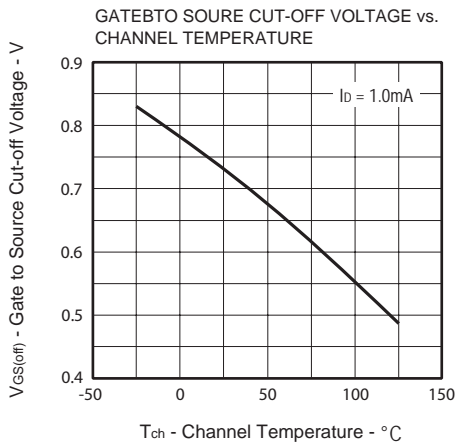
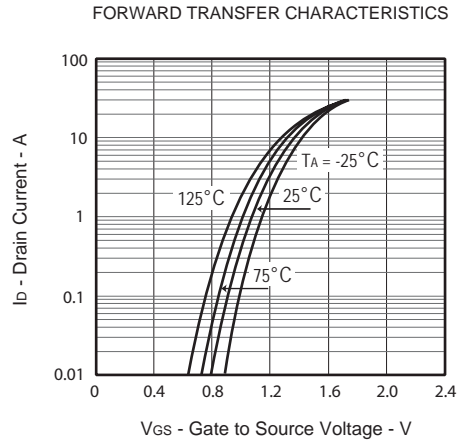
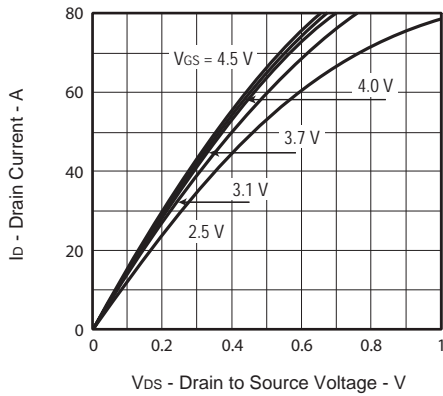
Symbol	Parameter	Conditions	Min	Typ	Max	Units
OFF CHARACTERISTICS						
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V , I _D =250uA	20			V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =16V , V _{GS} =0V			1	uA
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ±10V , V _{DS} =0V			±10	uA
ON CHARACTERISTICS						
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _D =1.0mA	0.5	0.74	1.5	V
R _{DS(ON)}	Drain-Source On-State Resistance	V _{GS} =4.5V , I _D =5.5A	5.0	6.5	8.5	m ohm
		V _{GS} =4.0V , I _D =5.5A	5.5	7.0	9.0	m ohm
		V _{GS} =3.7V , I _D =5.5A	6.0	7.5	9.5	m ohm
		V _{GS} =3.1V , I _D =5.5A	6.5	8.0	10.0	m ohm
		V _{GS} =2.5V , I _D =5.5A	7.0	9.0	11.5	m ohm
g _{FS}	Forward Transconductance	V _{DS} =10V , I _D =5.5A		36		S
DYNAMIC CHARACTERISTICS^b						
C _{ISS}	Input Capacitance	V _{DS} =10V, V _{GS} =0V f=1.0MHz		873		pF
C _{OSS}	Output Capacitance			278		pF
C _{RSS}	Reverse Transfer Capacitance			185		pF
SWITCHING CHARACTERISTICS^b						
t _{D(ON)}	Turn-On Delay Time	V _{DD} =16V I _D =5.5A V _{GS} =4.5V R _{GEN} =6 ohm		30		ns
t _r	Rise Time			65		ns
t _{D(OFF)}	Turn-Off Delay Time			32		ns
t _f	Fall Time			69		ns
Q _g	Total Gate Charge				15.6	
Q _{gs}	Gate-Source Charge	V _{DS} =16V, I _D =11A, V _{GS} =4.5V		2.5		nC
Q _{gd}	Gate-Drain Charge			6.7		nC
DRAIN-SOURCE DIODE CHARACTERISTICS AND MAXIMUM RATINGS						
V _{SD}	Diode Forward Voltage	V _{GS} =0V, I _S =11A		0.84	1.2	V

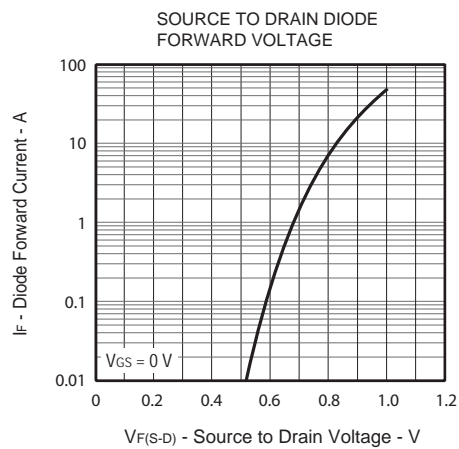
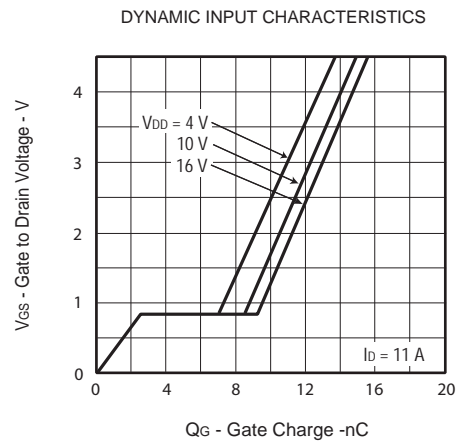
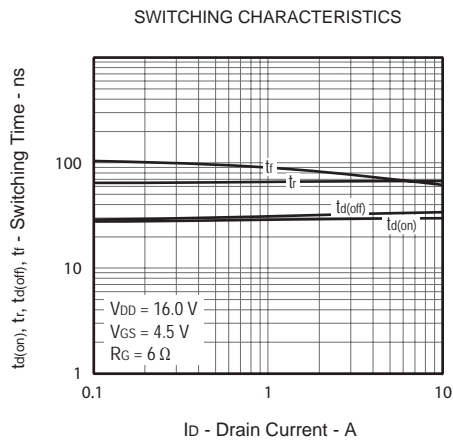
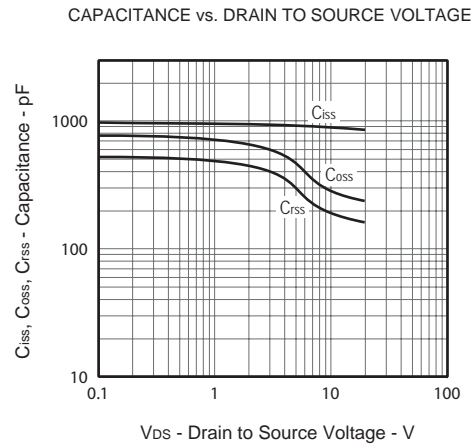
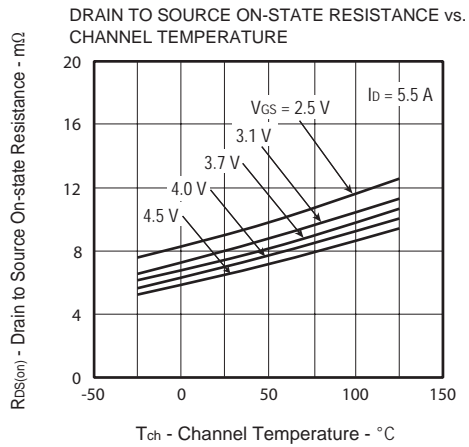
Notes

- a.Surface Mounted on FR4 Board of 1 inch² , 1oz.
- b.Guaranteed by design, not subject to production testing.
- c.Drain current limited by maximum junction temperature.

Jan,09,2014

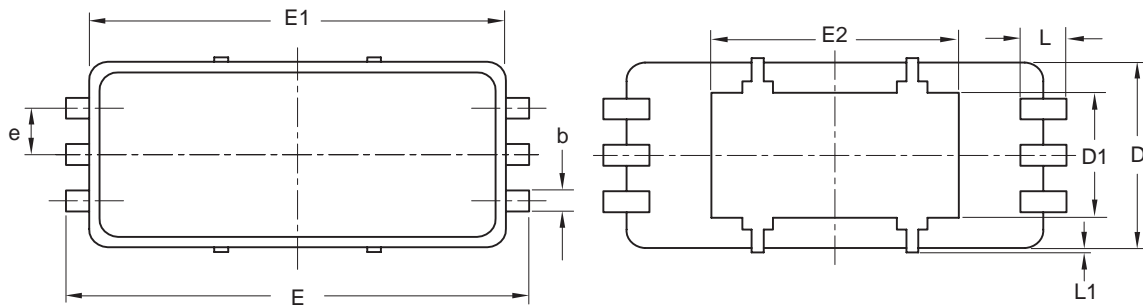






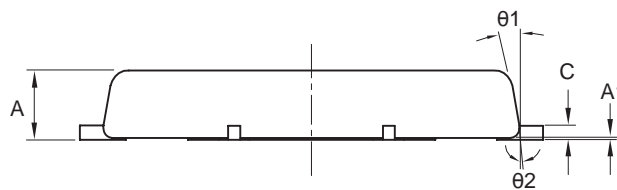
PACKAGE OUTLINE DIMENSIONS

DFN 2x5-6L



TOP VIEW

BOTTOM VIEW



SIDE VIEW

SYMBOLS	MILLIMETERS		
	MIN	NOM	MAX
A	0.70	0.75	0.80
A1	0.00	—	0.05
b	0.20	0.225	0.30
C	0.10	0.152	0.20
D	2.00 BSC		
D1	1.30	1.35	1.55
E	5.00 BSC		
E1	4.50 BSC		
E2	2.60	2.67	2.95
e	0.50 BSC		
L	0.40	0.50	0.60
L1	0.00	—	0.10
θ1	0°	10°	12°
θ2	3° BSC		

TOP MARKING DEFINITION

