

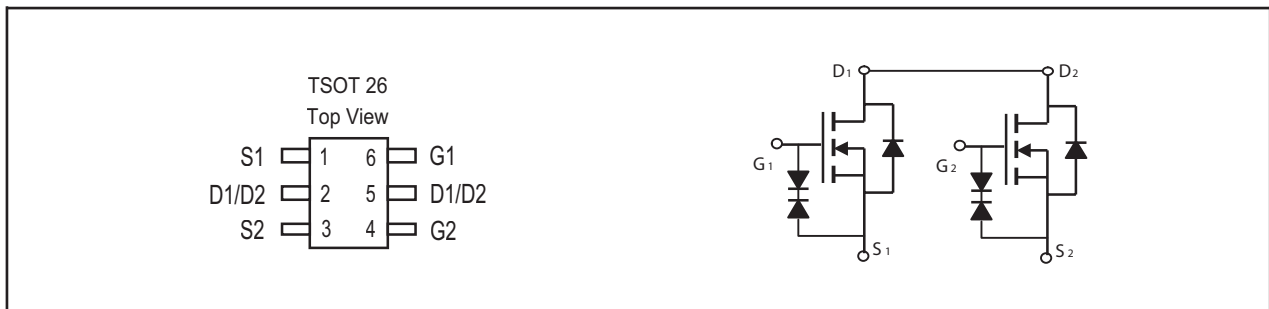


Dual N-Channel Enhancement Mode Field Effect Transistor

PRODUCT SUMMARY		
V _{DSS}	I _D	R _{DS(ON)} (mΩ) Max
20V	4.5A	34 @ V _{GS} =4.0V
		36 @ V _{GS} =3.7V
		40 @ V _{GS} =3.1V
		49 @ 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	±12	V
I _D	Drain Current-Continuous ^a	T _A =25°C	4.5
		T _A =70°C	3.6
I _{DM}	-Pulsed ^b	18	A
P _D	Maximum Power Dissipation ^a	T _A =25°C	1.25
		T _A =70°C	0.8
T _J , T _{STG}	Operating Junction and Storage Temperature Range	-55 to 150	°C

THERMAL CHARACTERISTICS

R _{θJA}	Thermal Resistance, Junction-to-Ambient ^a	100	°C/W
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STS8207

Ver 1.0

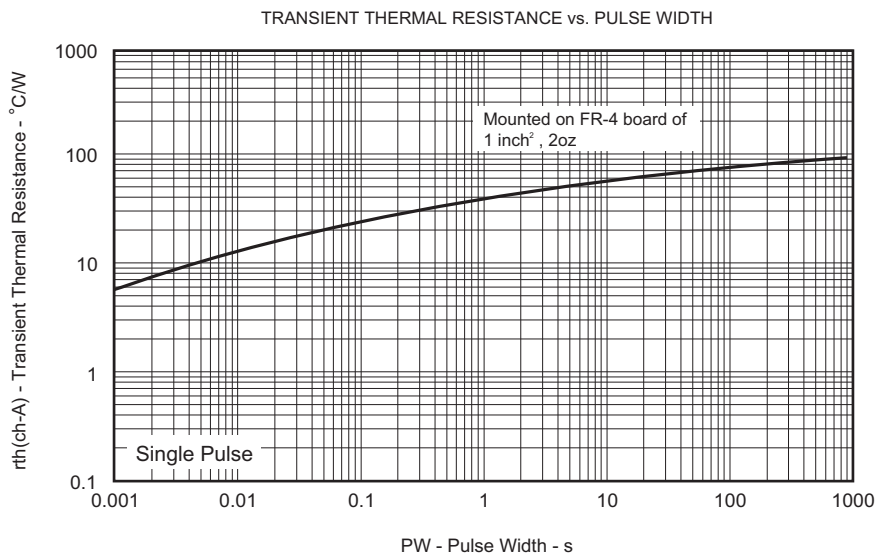
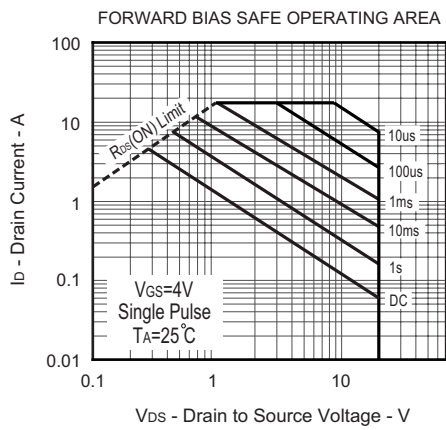
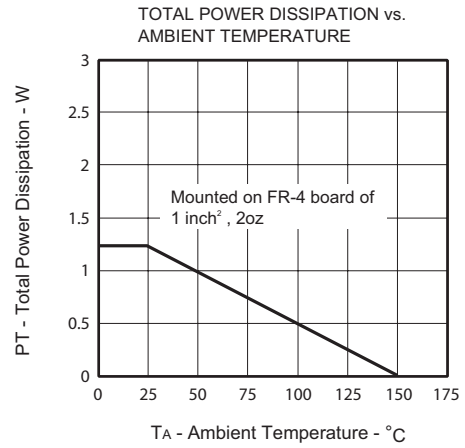
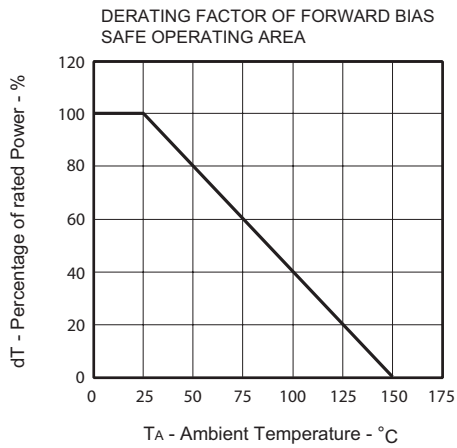
ELECTRICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

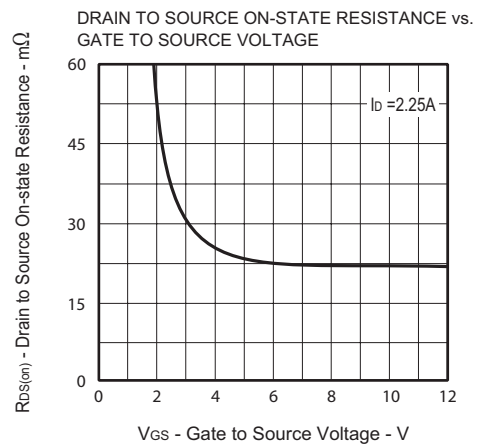
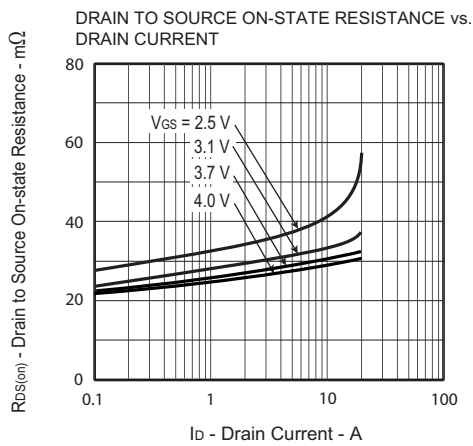
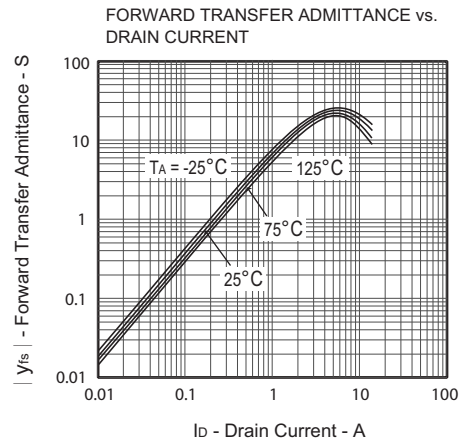
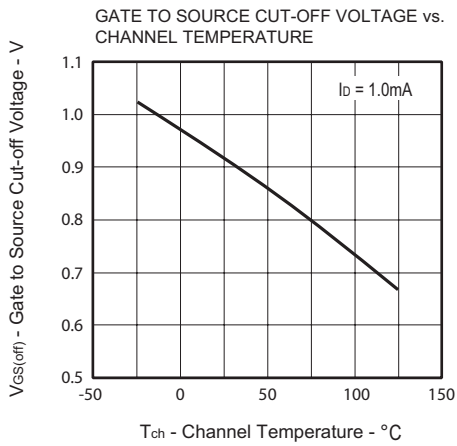
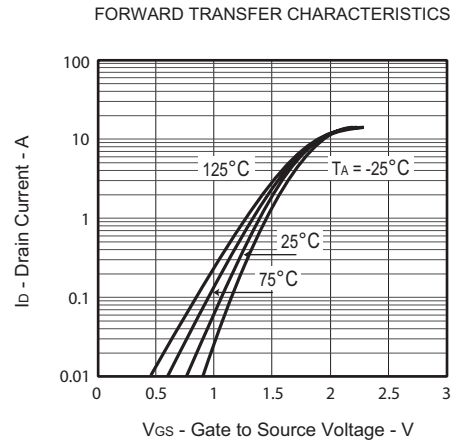
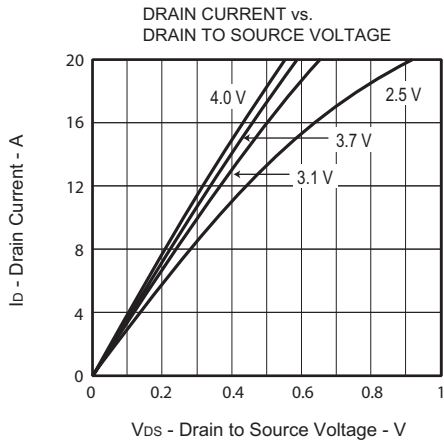
Symbol	Parameter	Conditions	Min	Typ	Max	Units
OFF CHARACTERISTICS						
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V , I _D =250uA	20			V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =16V , V _{GS} =0V			1	uA
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ±12V , V _{DS} =0V			±10	uA
ON CHARACTERISTICS						
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _D =1mA	0.5	0.9	1.5	V
R _{DS(ON)}	Drain-Source On-State Resistance	V _{GS} =4.0V , I _D =2.25A	21	26	34	m ohm
		V _{GS} =3.7V , I _D =2.25A	22	27	36	m ohm
		V _{GS} =3.1V , I _D =2.25A	23	30	40	m ohm
		V _{GS} =2.5V , I _D =2.25A	27	36	49	m ohm
g _{FS}	Forward Transconductance	V _{DS} =5V , I _D =2.25A		12		S
DYNAMIC CHARACTERISTICS ^c						
C _{ISS}	Input Capacitance	V _{DS} =10V, V _{GS} =0V f=1.0MHz		240		pF
C _{OSS}	Output Capacitance			120		pF
C _{RSS}	Reverse Transfer Capacitance			57		pF
SWITCHING CHARACTERISTICS ^c						
t _{D(ON)}	Turn-On Delay Time	V _{DD} =16V I _D =2.25A V _{GS} =4V R _{GEN} = 6 ohm		30		ns
t _r	Rise Time			92		ns
t _{D(OFF)}	Turn-Off Delay Time			240		ns
t _f	Fall Time			145		ns
Q _g	Total Gate Charge	V _{DS} =16V, I _D =4.5A, V _{GS} =4V		6.4		nC
Q _{gs}	Gate-Source Charge			1.3		nC
Q _{gd}	Gate-Drain Charge			3.7		nC
DRAIN-SOURCE DIODE CHARACTERISTICS AND MAXIMUM RATINGS						
V _{SD}	Diode Forward Voltage	V _{GS} =0V, I _S =2A		0.83	1.2	V

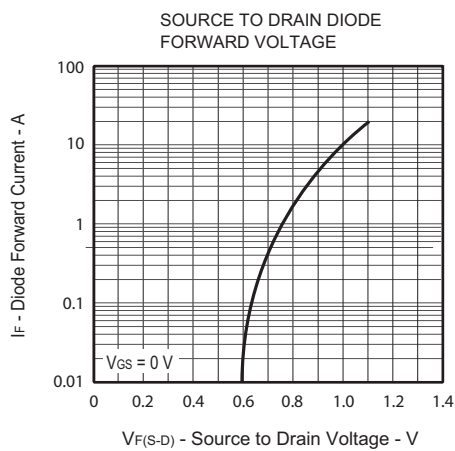
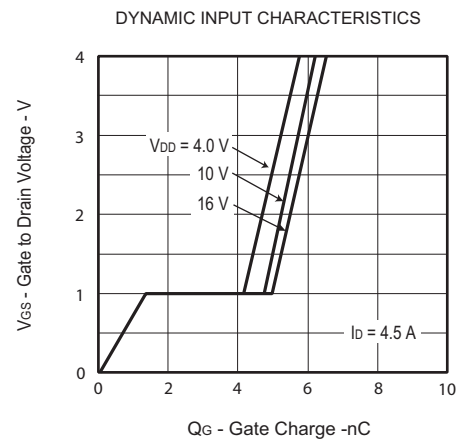
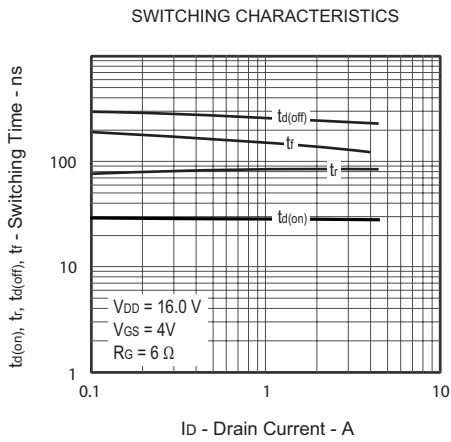
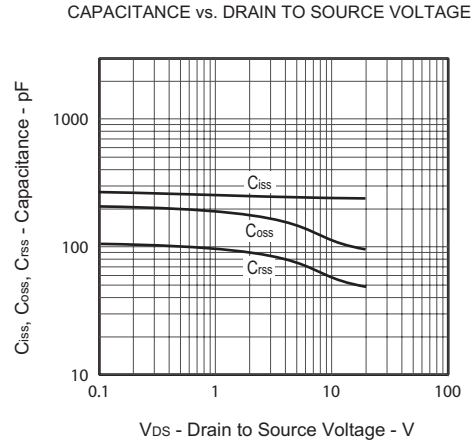
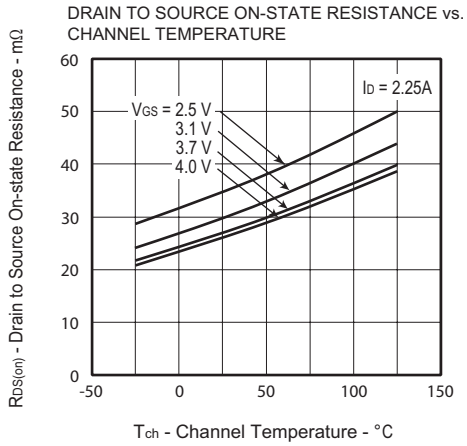
Notes

- a.Surface Mounted on FR4 Board, t ≤ 10sec.
- b.Pulse Test:Pulse Width ≤ 10us, Duty Cycle ≤ 1%.
- c.Guaranteed by design, not subject to production testing.

May,07,2012







PACKAGE OUTLINE DIMENSIONS

