

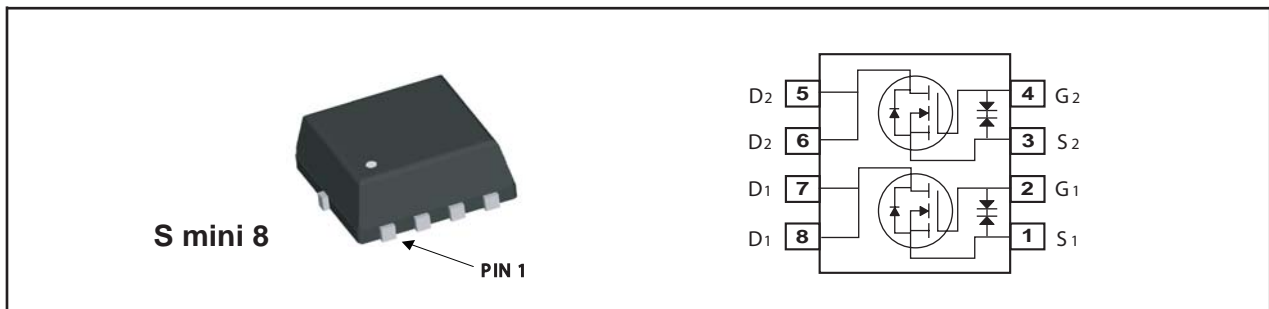


Dual N-Channel Enhancement Mode Field Effect Transistor

PRODUCT SUMMARY		
V _{DS}	I _D	R _{DS(ON)} (mΩ) Max
24V	10A	14.0 @ V _{GS} =4.5V
		15.0 @ V _{GS} =4.0V
		16.0 @ V _{GS} =3.7V
		17.5 @ V _{GS} =3.1V
		21.0 @ 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	24	V
V _{GS}	Gate-Source Voltage	±12	V
I _D	Drain Current-Continuous ^{a d}	T _A =25°C	10
		T _A =70°C	8
I _{DM}	-Pulsed ^d	60	A
E _{AS}	Single Pulse Avalanche Energy ^c	56	mJ
P _D	Maximum Power Dissipation ^a	T _A =25°C	1.32
		T _A =70°C	0.84
T _J , T _{STG}	Operating Junction and Storage Temperature Range	-55 to 150	°C

THERMAL CHARACTERISTICS

R _{θJA}	Thermal Resistance, Junction-to-Ambient ^a	95	°C/W
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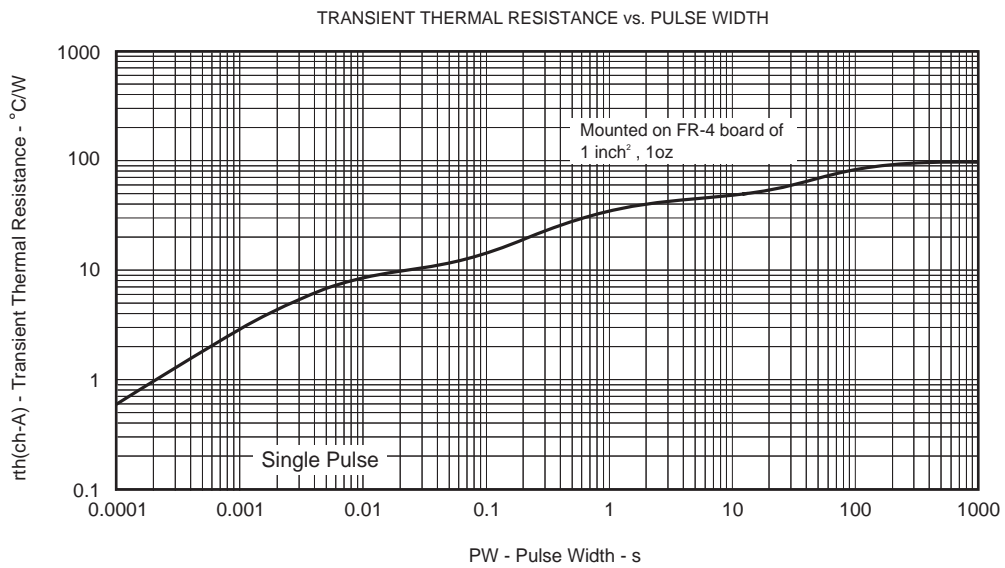
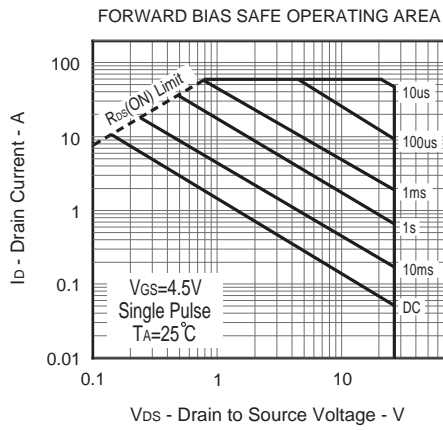
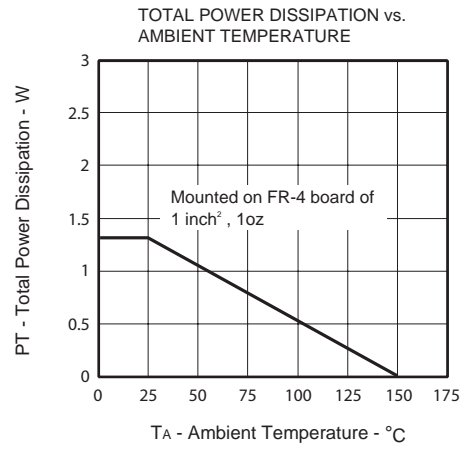
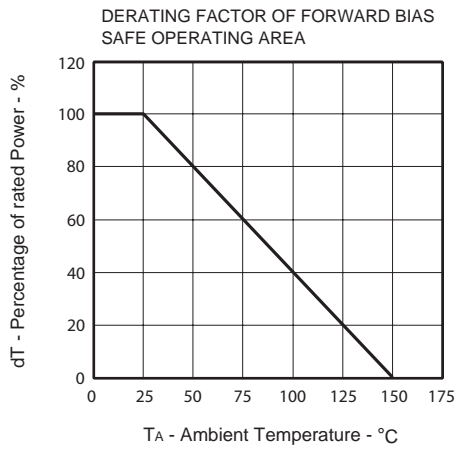
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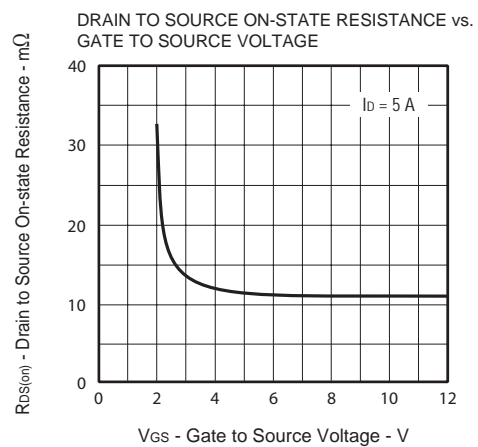
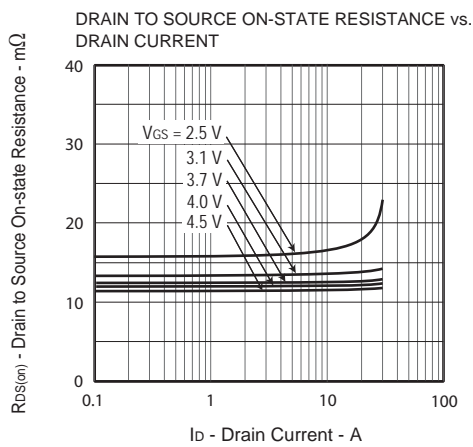
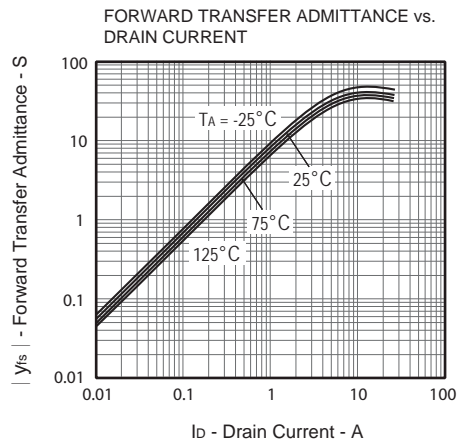
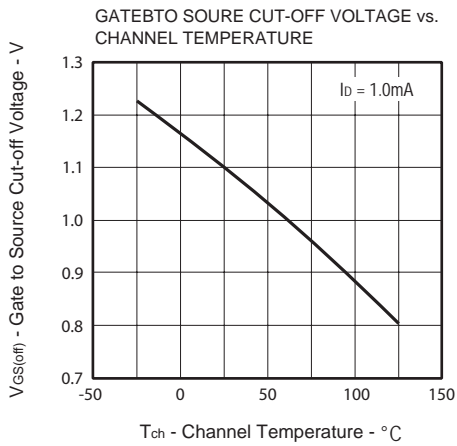
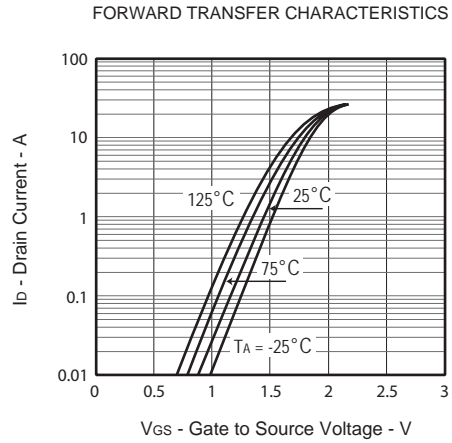
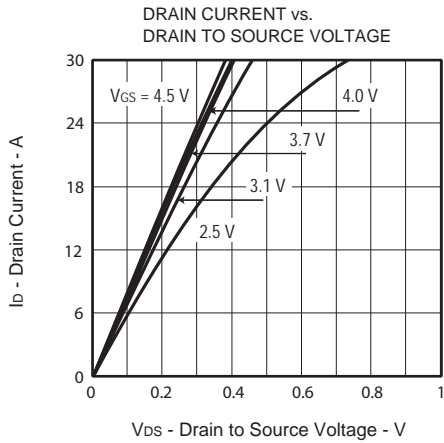
Ver 3.7

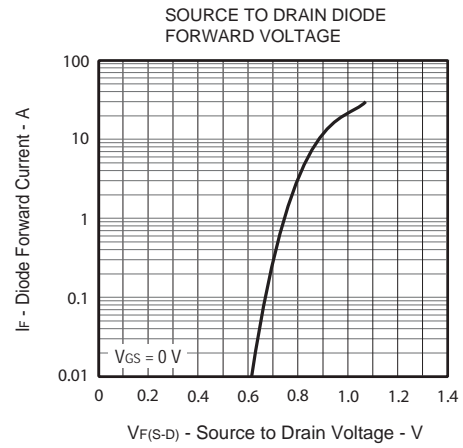
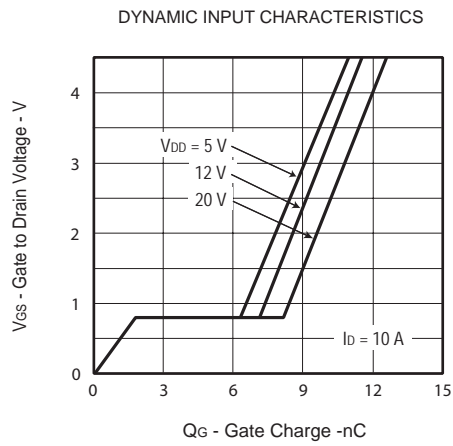
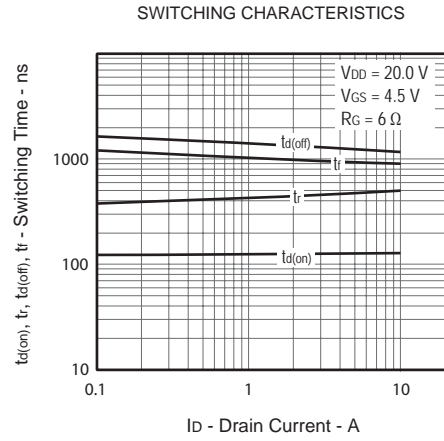
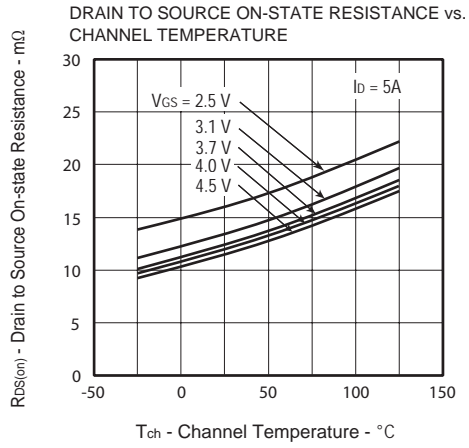
ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

Symbol	Parameter	Conditions	Min	Typ	Max	Units
OFF CHARACTERISTICS						
BV _{bss}	Drain-Source Breakdown Voltage	V _{GS} =0V , I _D =250uA	24			V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =20V , V _{GS} =0V			1	uA
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ±8V , V _{DS} =0V			±1	uA
ON CHARACTERISTICS						
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _D =1mA	0.5	1.1	1.5	V
R _{DS(ON)}	Drain-Source On-State Resistance	V _{GS} =4.5V , I _D =5A	8.0	11.5	14.0	m ohm
		V _{GS} =4.0V , I _D =5A	8.5	12.0	15.0	m ohm
		V _{GS} =3.7V , I _D =5A	9.0	12.5	16.0	m ohm
		V _{GS} =3.1V , I _D =5A	9.5	13.5	17.5	m ohm
		V _{GS} =2.5V , I _D =5A	11.0	16.0	21.0	m ohm
g _{FS}	Forward Transconductance	V _{DS} =10V , I _D =5A		28		S
SWITCHING CHARACTERISTICS^b						
t _{D(ON)}	Turn-On Delay Time	V _{DD} =20V I _D =5A V _{GS} =4.5V R _{GEN} = 6 ohm		122		ns
t _r	Rise Time			463		ns
t _{D(OFF)}	Turn-Off Delay Time			1200		ns
t _f	Fall Time			920		ns
Q _g	Total Gate Charge			12.5		nC
Q _{gs}	Gate-Source Charge	V _{DS} =20V, I _D =10A, V _{GS} =4.5V		1.7		nC
Q _{gd}	Gate-Drain Charge			6.5		nC
DRAIN-SOURCE DIODE CHARACTERISTICS AND MAXIMUM RATINGS						
V _{SD}	Diode Forward Voltage	V _{GS} =0V, I _S =10A		0.85	1.2	V
Notes						
a.Surface Mounted on FR4 Board of 1 inch ² , 1oz.						
b.Guaranteed by design, not subject to production testing.						
c.Starting T _J =25°C, L=0.5mH, V _{DD} = 10V.						
d.Drain current limited by maximum junction temperature.						

May,29,2014

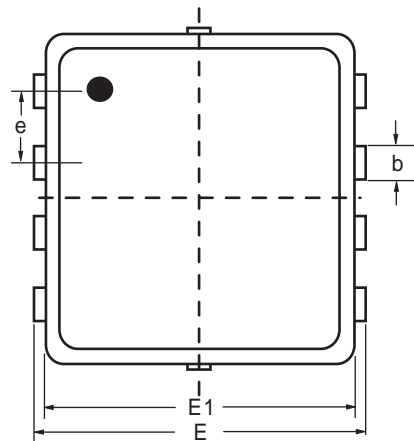




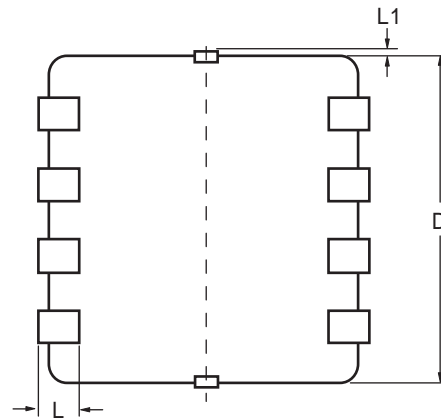


PACKAGE OUTLINE DIMENSIONS

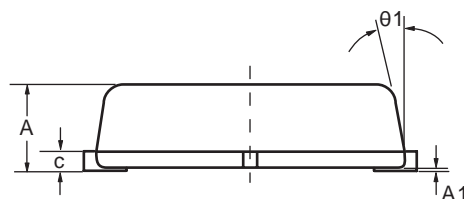
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TOP VIEW



BOTTOM VIEW



SIDE VIEW

SYMBOLS	MILLIMETERS		
	MIN	NOM	MAX
A	0.700	0.800	0.900
A1	0.000	—	0.050
b	0.240	0.300	0.350
c	0.080	0.152	0.250
D	2.800	2.900	3.000
E	2.700	2.800	2.900
E1	2.200	2.300	2.400
e	0.650 BSC		
L	0.200	0.375	0.450
L1	0.000	—	0.100
θ_1	0°	10°	12°

TOP MARKING DEFINITION

