



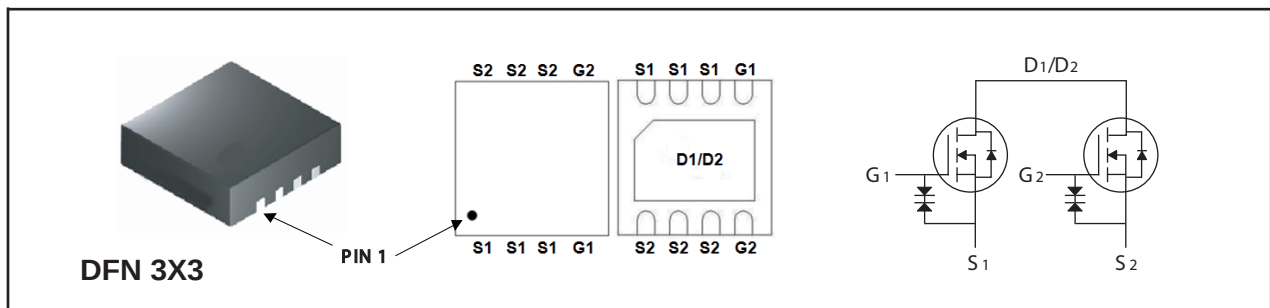
Dual N-Channel Enhancement Mode Field Effect Transistor

PRODUCT SUMMARY

V _{DSS}	I _D	R _{DS(ON)} (mΩ) Max
20V	46A	5.5 @ V _{GS} =4.5V
		6.5 @ V _{GS} =3.9V
		7.0 @ V _{GS} =3.1V
		7.5 @ 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_C=25°C unless otherwise noted)

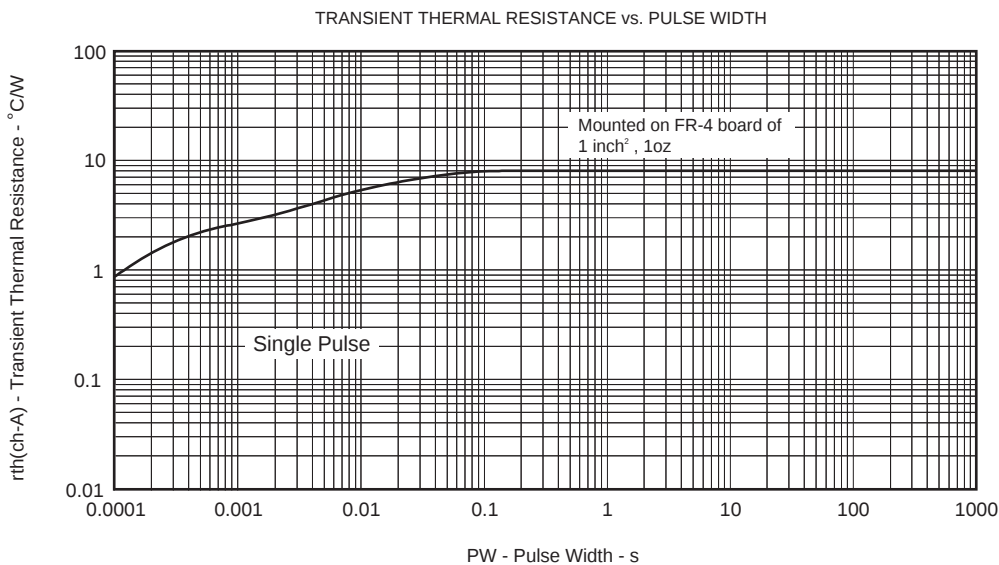
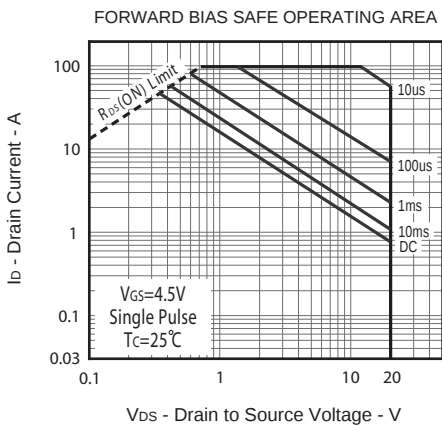
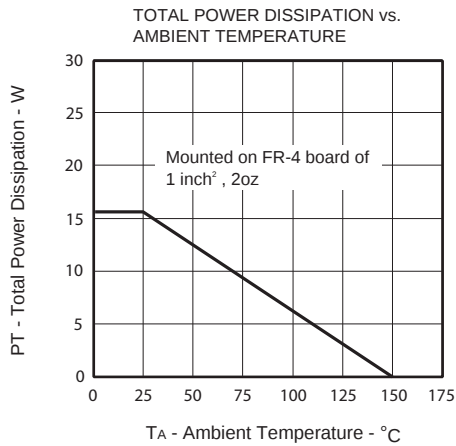
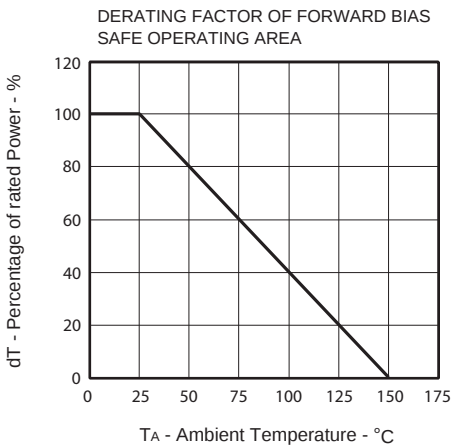
Symbol	Parameter	Limit	Units
V _{DS}	Drain-Source Voltage	20	V
V _{GS}	Gate-Source Voltage	±12	V
I _D	Drain Current-Continuous ^c	T _A =25°C	46
		T _A =70°C	36.8
I _{DM}	-Pulsed ^{a c}	96	A
P _D	Maximum Power Dissipation	T _A =25°C	15.6
		T _A =70°C	10.0
T _J , T _{STG}	Operating Junction and Storage Temperature Range	-55 to 150	°C

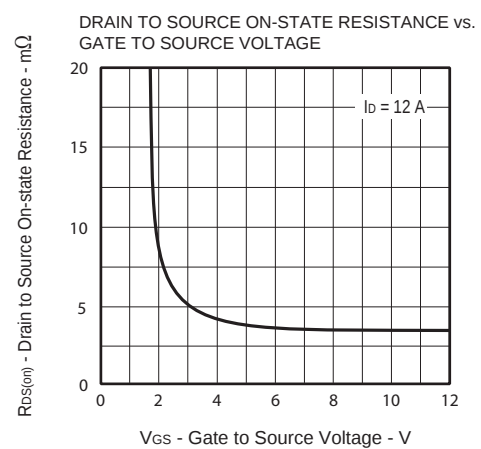
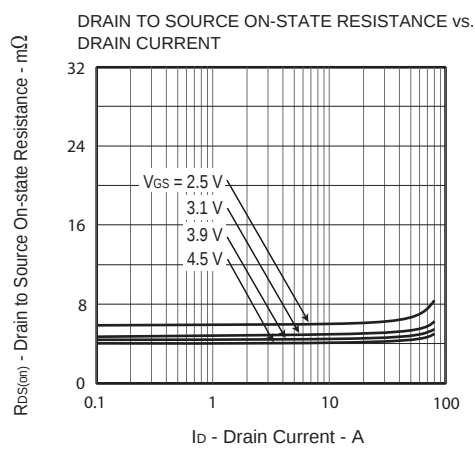
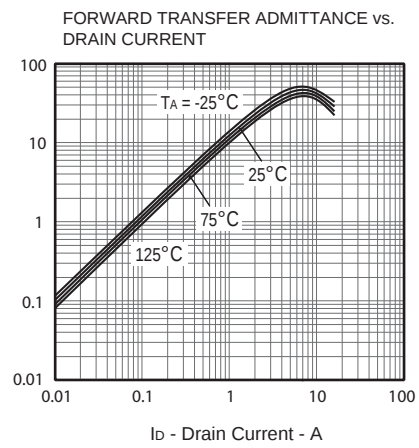
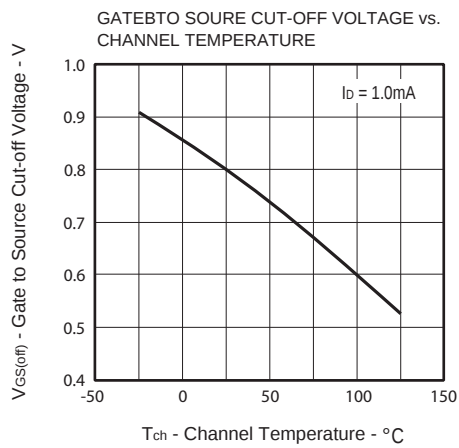
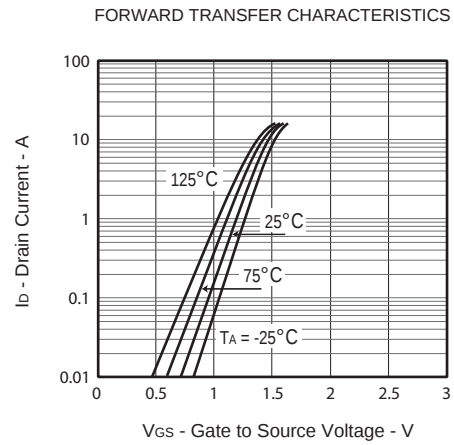
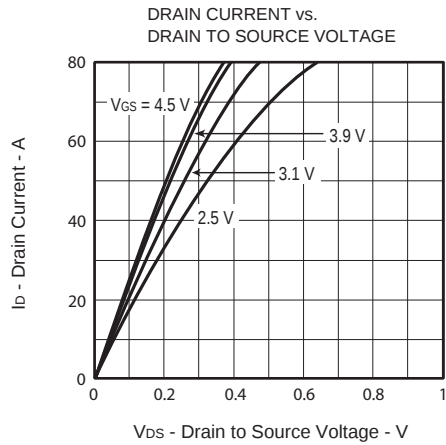
THERMAL CHARACTERISTICS

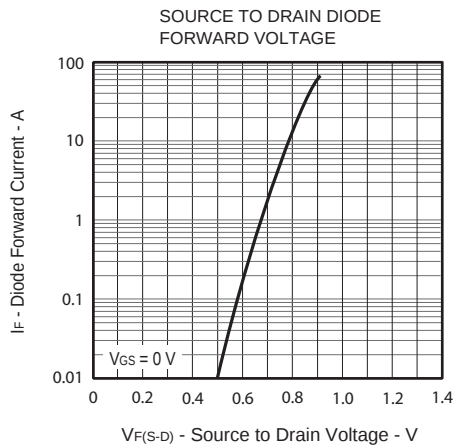
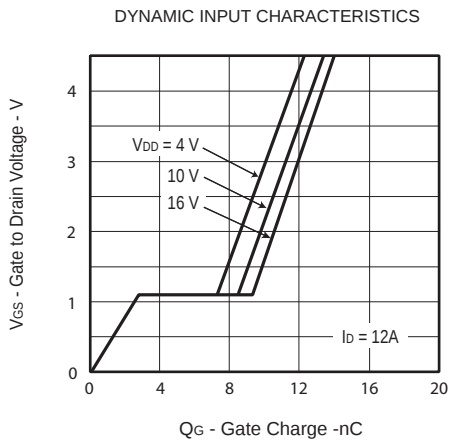
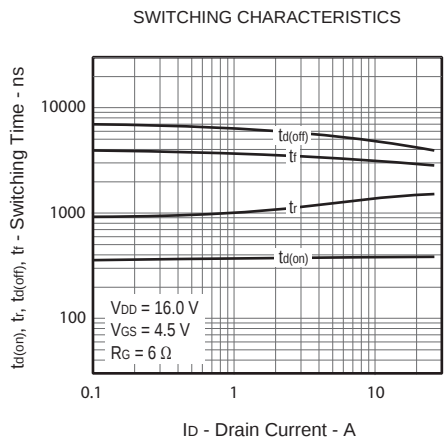
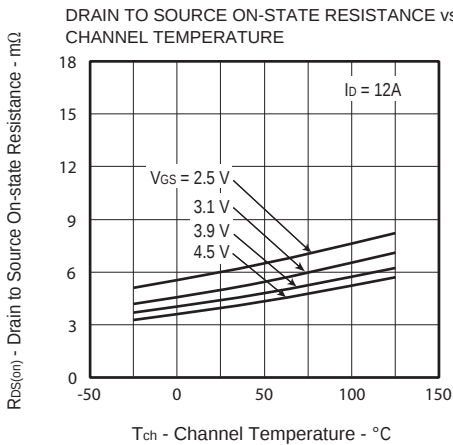
R _{θJC}	Thermal Resistance, Junction-to-Case	8	°C/W
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ELECTRICAL CHARACTERISTICS (T_C=25°C unless otherwise noted)

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	0.8	1.5	V
R _{DS(ON)}	Drain-Source On-State Resistance	V _{GS} =4.5V , I _D =12A	3.0	4.0	5.5	m ohm
		V _{GS} =3.9V , I _D =12A	3.5	4.5	6.5	m ohm
		V _{GS} =3.1V , I _D =12A	4.0	5.0	7.0	m ohm
		V _{GS} =2.5V , I _D =12A	4.5	6.0	7.5	m ohm
g _{FS}	Forward Transconductance	V _{DS} =5V , I _D =12A		60		S
SWITCHING CHARACTERISTICS ^b						
t _{D(ON)}	Turn-On Delay Time	V _{DD} =16V I _D =12A V _{GS} =4.5V R _{GEN} =6 ohm		368		ns
t _r	Rise Time			1388		ns
t _{D(OFF)}	Turn-Off Delay Time			4472		ns
t _f	Fall Time			3016		ns
Q _g	Total Gate Charge	V _{DS} =16V,I _D =12A,V _{GS} =4.5V		14		nC
Q _{gs}	Gate-Source Charge	V _{DS} =16V,I _D =12A, V _{GS} =4.5V		2.8		nC
Q _{gd}	Gate-Drain Charge			6.6		nC
DRAIN-SOURCE DIODE CHARACTERISTICS AND MAXIMUM RATINGS						
V _{SD}	Diode Forward Voltage	V _{GS} =0V,I _S =23A		0.82	1.2	V
Notes						
a.Pulse Test:Pulse Width ≤ 10us, Duty Cycle ≤ 1%.						
b.Guaranteed by design, not subject to production testing.						
c.Drain current limited by maximum junction temperature.						
d.Mounted on FR4 Board of 1 inch ² , 2oz.						

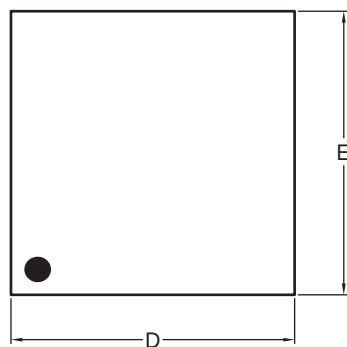




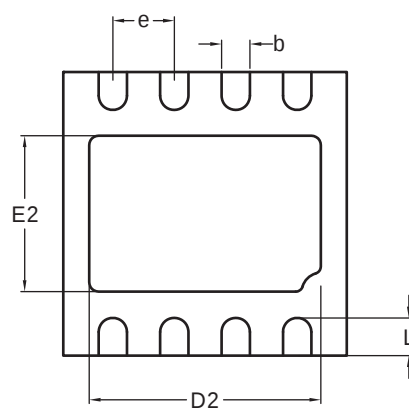


PACKAGE OUTLINE DIMENSIONS

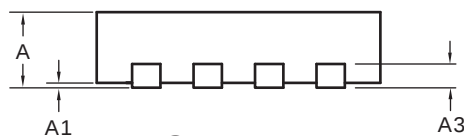
DFN 3x3



TOP VIEW



BOTTOM VIEW



SIDE VIEW

SYMBOLS	MILLIMETERS		
	MIN	NOM	MAX
A	0.700	0.750	0.800
A1	0.000	—	0.050
A3	0.200 REF.		
b	0.250	0.300	0.350
D	2.950	3.000	3.050
D2	2.300	2.450	2.550
E	2.950	3.000	3.050
E2	1.500	1.650	1.750
e	0.650 BSC		
L	0.300	0.400	0.500

TOP MARKING DEFINITION

