Preliminary Datasheet

N-Channel 30V MOSFET

FEATURES

- Advance Trench Process Technology
- High Density Cell Design for Ultra Low Onresistance

PRODUCTY SUMMARY			
V_{DS}	$R_{DS(on)}$ m(Ω)		I_D(A)
30	14	@V_{GS}=10V	18
	21	@V_{GS}=4.5V	15

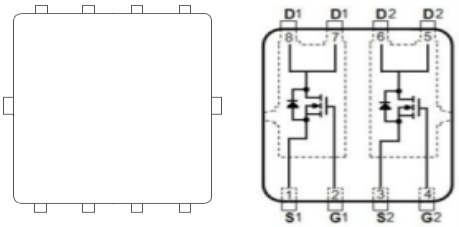
Application

- Portable Devices
- Consumer Electronics

Mechanical

- Case: DFN3333 Package

DFN3333



Packing Information

Package	Packing
DFN3333	5Kpcs/13"Reel

Maximum Ratings (T_A=25°C unless otherwise specified)			
Parameter	**Symbol**	**Limit**	**Unit**
DrainSource Voltage	V_{DS}	30	V
GateSource Voltage	V_{GS}	±20	V
Continuous Drain Current [4)]	I_D	18	A
Maximum Power Dissipation	P_D	5	W
Pulsed Drain Current [1)]	I_{DM}	72	A
Operating Junction and Storage Temperature Range	T_J, T_{STG}	55~150	°C

Typical Thermal Resistance			
Parameter	**Symbol**	**Limit**	**Unit**
JunctiontoAmbient Thermal Resistance	$R_{\theta JA}$	62.5	°C/W

NOTES :
1. Pulse width<300us, Duty cycle<2%.
2. Essentially independent of operating temperature typical characteristics.
3. Repetitive rating, pulse width limited by junction temperature TJ(MAX)=150°C. Ratings are based on low frequency and duty cycles to keep initial TJ =25°C.
4. The maximum current rating is package limited.
5. RQJA is the sum of the junctiontocase and casetoambient thermal resistance where the case thermal reference is defined as the solder mounting surface of the drain pins. Mounted on a 1 inch2 with 2oz.square pad of copper.
6. Guaranteed by design, not subject to production testing.

Electrical Characteristics (T_A = 25°C UNLESS OTHERWISE NOTED)						
Characteristics	Symbol	Test Condition	Limits			Unit
			Min	Typ	Max	
Static						
DrainSource Breakdown Voltage	B_{VDSS}	VGS = 0V, ID =250uA	30	-	-	V
Gate Threshold Voltage	$V_{GS(th)}$	VDS=VGS, ID=250uA	1.00	1.60	3.00	V
DrainSource OnState Resistance	$R_{DS(on)}$	VGS=10V,ID=18A	-	12	14	mΩ
		VGS=4.5V,ID=15A	-	18	21	mΩ
Zero Gate Voltage Drain Current	I_{DSS}	VDS=30V,VGS=0V			1.00	uA
GateSource Leakage Current	I_{GSS}	VGS=±20V,VDS=0V			±100	nA

DrainSource Diode						
Maximum Continuous Body Diode Forward Current	I_S	V_G=V_D=0V , Force Current	-	-	1.2	A
Diode Forward Voltage	V_{SD}	IS=1.0A, VGS=0V	-	-	1.5	V

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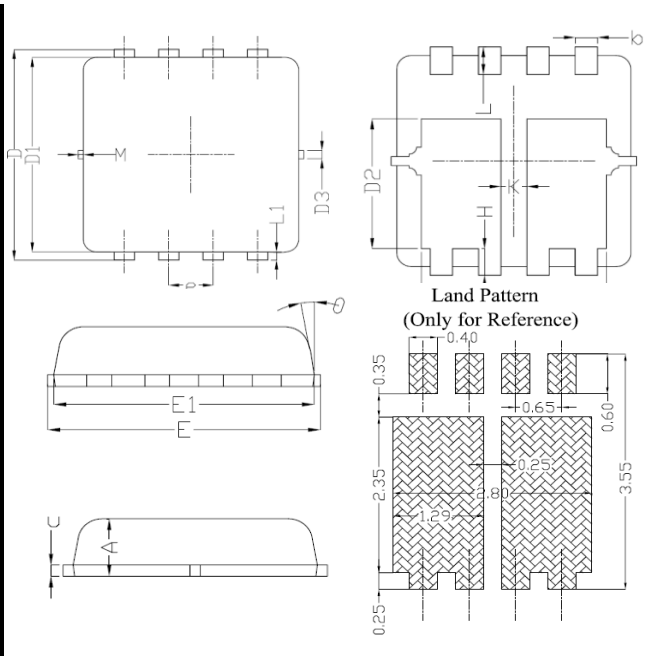
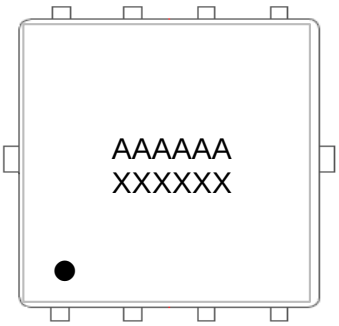
Package Outline Dimensions (inches and millimeters)

DFN3333				
SYMBOL	Dimensions			
	Millimeters		Inches	
	Min	Max	Min	Max
A	0.70	0.80	0.03	0.03
b	0.25	0.35	0.01	0.01
c	0.10	0.25	0.00	0.01
D	3.25	3.45	0.13	0.14
D1	3.00	3.20	0.12	0.13
D2	1.78	1.98	0.07	0.08
D3	-	0.13	-	0.01
E	3.20	3.40	0.13	0.13
E1	3.00	3.20	0.12	0.13
E2	2.39	2.59	0.09	0.10
e	0.65BSC			
H	0.30	0.50	0.01	0.02
L	0.30	0.50	0.01	0.02
L1	0.13		-	0.005
K	0.30	-	0.01	-
θ	-	12°	-	12°
M	-	0.15	-	0.01



Marking Information



First line:

AAAAAA = Product number

Second line:

XXXXXX = Tracking number

Third line: Pin1 Point