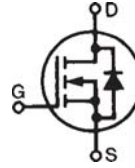


**HiPerFET™ Power
MOSFET
ISOPLUS264™**

IXFL34N100

V_{DSS} = 1000V
I_{D25} = 30A
R_{DS(on)} ≤ 280mΩ



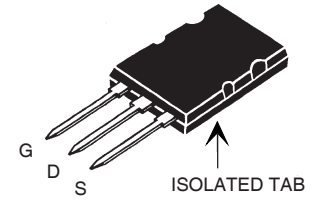
(Electrically Isolated Tab)

Single-Die MOSFET

N-Channel Enhancement Mode
 Avalanche Rated, Low Q_g, High dV/dt, Low t_{rr}

Symbol	Test Conditions	Maximum Ratings	
V _{DSS}	T _J = 25°C to 150°C	1000	V
V _{DGR}	T _J = 25°C to 150°C, R _{GS} = 1MΩ	1000	V
V _{GSS}	Continuous	± 20	V
V _{GSM}	Transient	± 30	V
I _{D25}	T _C = 25°C	30	A
I _{DM}	T _C = 25°C, Pulse Width Limited by T _{JM}	136	A
I _A	T _C = 25°C	34	A
E _{AS}	T _C = 25°C	4	J
dv/dt	I _S ≤ I _{DM} , di/dt ≤ 100 A/μs, V _{DD} ≤ V _{DSS} T _J ≤ 150°C, R _G = 2 Ω	5	V/ns
P _D	T _C = 25°C	550	W
T _J		-55 ... +150	°C
T _{JM}		150	°C
T _{stg}		-55 ... +150	°C
T _L	1.6 mm (0.063 in.) from Case for 10s	300	°C
T _{SOLD}	Plastic body for 10s	260	°C
F _C	Mounting Force	40..120 / 9..27	N/lb.
V _{ISOL}	50/60 Hz, RMS t = 1 min I _{ISOL} ≤ 1 mA t = 1 s	2500 3000	V~ V~
Weight		8	g

ISOPLUS264



G = Gate
 S = Source
 D = Drain

Features

- Silicon Chip on Direct-Copper Bond (DCB) Substrate
 - High Power Dissipation
 - Isolated Mounting Surface
 - 2500V Electrical Isolation
- Low Drain to Tab Capacitance(<30pF)
- Low RDS (on) HDMOS™ Process
- Rugged Polysilicon Gate Cell Structure
- Avalanche Rated
- Fast intrinsic Rectifier

Advantages

- High Power Density
- Easy to Mount
- Space Savings

Applications:

- Switched-Mode and Resonant-Mode Power Supplies
- DC-DC Converters
- DC Choppers
- Laser Drivers
- AC and DC Motor Drives
- Robotics and Servo Controls

Symbol	Test Conditions (T _J = 25°C, Unless Otherwise Specified)	Characteristic Values		
		Min.	Typ.	Max.
BV _{DSS}	V _{GS} = 0 V, I _D = 3mA	1000		V
V _{GS(th)}	V _{DS} = V _{GS} , I _D = 8mA	3.0		5.5 V
I _{GSS}	V _{GS} = ±20 V, V _{DS} = 0V			± 100 nA
I _{DSS}	V _{DS} = V _{DSS} , V _{GS} = 0V T _J = 125°C			100 μA 2 mA
R _{DS(on)}	V _{GS} = 10V, I _D = 17A, Note 1			280 mΩ

Symbol	Test Conditions ($T_J = 25^\circ\text{C}$, Unless Otherwise Specified)	Characteristic Values		
		Min.	Typ.	Max.
g_{fs}	$V_{DS} = 15\text{V}, I_D = 17\text{A}$, Note 1	18	40	S
C_{iss}	$V_{GS} = 0\text{V}, V_{DS} = 25\text{V}, f = 1\text{MHz}$		9200	pF
C_{oss}			1200	pF
C_{rss}			300	pF
$t_{d(on)}$	Resistive Switching Times $V_{GS} = 10\text{V}, V_{DS} = 0.5 \cdot V_{DSS}, I_D = 17\text{A}$ $R_G = 1\Omega$ (External)		41	ns
t_r			65	ns
$t_{d(off)}$			110	ns
t_f			30	ns
$Q_{g(on)}$	$V_{GS} = 10\text{V}, V_{DS} = 0.5 \cdot V_{DSS}, I_D = 17\text{A}$		380	nC
Q_{gs}			65	nC
Q_{gd}			185	nC
R_{thJC}			0.225	$^\circ\text{C/W}$
R_{thCS}		0.15		$^\circ\text{C/W}$

Source-Drain Diode

Symbol	Test Conditions ($T_J = 25^\circ\text{C}$, Unless Otherwise Specified)	Characteristic Values		
		Min.	Typ.	Max.
I_S	$V_{GS} = 0\text{V}$			34 A
I_{SM}	Repetitive, Pulse Width Limited by T_{JM}			136 A
V_{SD}	$I_F = I_S, V_{GS} = 0\text{V}$, Note 1			1.3 V
t_{rr}	$I_F = I_S, V_{GS} = 0\text{V}$ $-di/dt = 100\text{A}/\mu\text{s}$ $V_R = 100\text{V}$ $T_J = 125^\circ\text{C}$		180	ns
Q_{RM}			330	ns
I_{RM}			2	μC
			8	A

Note 1. Pulse test, $t \leq 300\mu\text{s}$, duty cycle, $d \leq 2\%$.

Please see IXFN36N100 data sheet for characteristic curves.

ISOPLUS264™ (IXFL) Outline

Note: Bottom heatsink meets

SYM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	.190	.205	4.83	5.21
A1	.102	.118	2.59	3.00
A2	.046	.055	1.17	1.40
b	.045	.055	1.14	1.40
b1	.087	.102	2.21	2.59
b2	.111	.126	2.82	3.20
c	.020	.029	0.51	0.74
D	1.020	1.040	25.91	26.42
E	.770	.788	19.56	20.09
e	.215 BSC		5.46 BSC	
L	.780	.820	19.81	20.83
L1	.080	.102	2.03	2.59
Q	.210	.235	5.33	5.97
Q1	.490	.513	12.45	13.03
R	.150	.180	3.81	4.57
R1	.100	.130	2.54	3.30
S	.668	.690	16.97	17.53
T	.801	.821	20.34	20.85
U	.065	.080	1.65	2.03

Ref: IXYS CO 0128

IXYS Reserves the Right to Change Limits, Test Conditions, and Dimensions.

IXYS MOSFETs and IGBTs are covered by one or more of the following U.S. patents:	4,835,592	4,931,844	5,049,961	5,237,481	6,162,665	6,404,065 B1	6,683,344	6,727,585	7,005,734 B2	7,157,338B2
	4,850,072	5,017,508	5,063,307	5,381,025	6,259,123 B1	6,534,343	6,710,405 B2	6,759,692	7,063,975 B2	
	4,881,106	5,034,796	5,187,117	5,486,715	6,306,728 B1	6,583,505	6,710,463	6,771,478 B2	7,071,537	



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