

Excellent Integrated System Limited

Stocking Distributor

Click to view price, real time Inventory, Delivery & Lifecycle Information:

[IXYS Corporation](#)

[IXFR24N50](#)

For any questions, you can email us directly:

sales@integrated-circuit.com

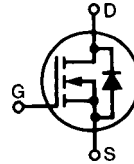
IXYS Advanced Technical Information

**HiPerFET™ Power MOSFETs
 ISOPLUS247™**

**IXFR 26N50
 IXFR 24N50**

(Electrically Isolated Back Surface)

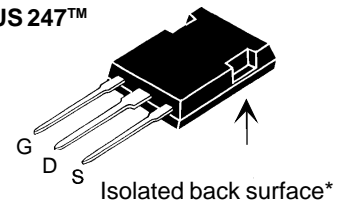
N-Channel Enhancement Mode
 High dV/dt, Low t_{rr}, HDMOS™ Family



V_{DSS}	I_{D25}	R_{DS(on)}
500 V	24 A	0.20 Ω
500 V	22 A	0.23 Ω
t_{rr} ≤ 250 ns		

Symbol	Test Conditions	Maximum Ratings		
V_{DSS}	T _J = 25°C to 150°C	500	V	
V_{DGR}	T _J = 25°C to 150°C; R _{GS} = 1 MΩ	500	V	
V_{GS}	Continuous	±20	V	
V_{GSM}	Transient	±30	V	
I_{D25}	T _C = 25°C	26N50	26	A
		24N50	24	A
I_{DM}	T _C = 25°C, Pulse width limited by T _{JM}	26N50	104	A
		24N50	96	A
I_{AR}	T _C = 25°C	26N50	26	A
		24N50	24	A
E_{AR}	T _C = 25°C	30	mJ	
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	250	W	
T_J		-55 ... +150	°C	
T_{JM}		150	°C	
T_{stg}		-55 ... +150	°C	
T_L	1.6 mm (0.062 in.) from case for 10 s	300	°C	
V_{ISOL}	50/60 Hz, RMS t = 1 minute leads-to-tab	2500	V~	
Weight		6	g	

ISOPLUS 247™



G = Gate D = Drain
 S = Source

* Patent pending

Features

- Silicon chip on Direct-Copper-Bond substrate
- High power dissipation
- Isolated mounting surface
- 2500V electrical isolation
- Low drain to tab capacitance(<50pF)
- Low R_{DS(on)} HDMOS™ process
- Rugged polysilicon gate cell structure
- Unclamped Inductive Switching (UIS) rated
- Fast intrinsic Rectifier

Applications

- DC-DC converters
- Battery chargers
- Switched-mode and resonant-mode power supplies
- DC choppers
- AC motor control

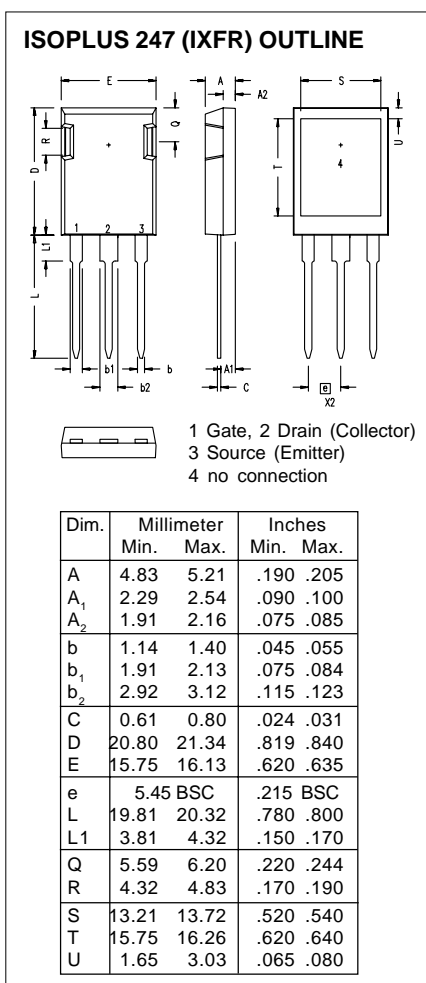
Advantages

- Easy assembly
- Space savings
- High power density

Symbol	Test Conditions	Characteristic Values (T _J = 25°C, unless otherwise specified)		
		min.	typ.	max.
V_{DSS}	V _{GS} = 0 V, I _D = 250uA	500		V
V_{GS(th)}	V _{DS} = V _{GS} , I _D = 4mA	2		V
I_{GSS}	V _{GS} = ±20 V _{DC} , V _{DS} = 0			±100 nA
I_{DSS}	V _{DS} = 0.8 • V _{DSS} V _{GS} = 0 V	T _J = 25°C T _J = 125°C		200 μA 1 mA
R_{DS(on)}	V _{GS} = 10 V, I _D = I _T Notes 1 & 2	26N50 24N50		0.20 Ω 0.23 Ω

IXFR 24N50
IXFR 26N50

Symbol	Test Conditions	Characteristic Values ($T_J = 25^\circ\text{C}$, unless otherwise specified)	Characteristic Values		
			min.	typ.	max.
g_{fs}	$V_{DS} = 15\text{ V}; I_D = I_T$ Note 1		11	21	S
C_{iss}	$V_{GS} = 0\text{ V}, V_{DS} = 25\text{ V}, f = 1\text{ MHz}$		4200		pF
C_{oss}			450		pF
C_{rss}			135		pF
$t_{d(on)}$	$V_{GS} = 10\text{ V}, V_{DS} = 0.5 \cdot V_{DSS}, I_D = I_T$ $R_G = 1\ \Omega$ (External),		16	25	ns
t_r			33	45	ns
$t_{d(off)}$			65	80	ns
t_f			30	40	ns
$Q_{g(on)}$	$V_{GS} = 10\text{ V}, V_{DS} = 0.5 \cdot V_{DSS}, I_D = I_T$		135	160	nC
Q_{gs}			28	40	nC
Q_{gd}			62	85	nC
R_{thJC}				0.50	K/W
R_{thCK}			0.15		K/W



Symbol	Test Conditions	Characteristic Values ($T_J = 25^\circ\text{C}$, unless otherwise specified)	Characteristic Values		
			min.	typ.	max.
I_S	$V_{GS} = 0\text{ V}$			26	A
I_{SM}	Repetitive; pulse width limited by T_{JM}			104	A
V_{SD}	$I_F = I_S, V_{GS} = 0\text{ V}$, Note 1			1.5	V
t_{rr}	$I_F = I_S, -di/dt = 100\text{ A}/\mu\text{s}$, $V_R = 100\text{ V}$	$T_J = 25^\circ\text{C}$		250	ns
		$T_J = 125^\circ\text{C}$		400	ns
Q_{RM}		$T_J = 25^\circ\text{C}$	1	1.5	μC
		$T_J = 125^\circ\text{C}$	2		μC
I_{RM}		$T_J = 25^\circ\text{C}$	10		A
		$T_J = 125^\circ\text{C}$	15		A

- Note: 1. Pulse test, $t \leq 300\ \mu\text{s}$, duty cycle $d \leq 2\%$
 2. I_T test current: IXFR26N50 $I_T = 13\text{ A}$
 IXFR24N50 $I_T = 12\text{ A}$
 3. See IXFR26N50 data sheet for characteristic curves.