

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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HiPerFET™ Power MOSFETs Single Die MOSFET

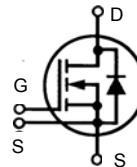
N-Channel Enhancement Mode
Avalanche Rated, High dv/dt, Low t_{rr}

Preliminary data sheet

Symbol	Test Conditions	Maximum Ratings		
V_{DSS}	$T_J = 25^\circ\text{C}$ to 150°C	500	V	
V_{DGR}	$T_J = 25^\circ\text{C}$ to 150°C ; $R_{GS} = 1 \text{ M}\Omega$	500	V	
V_{GS}	Continuous	± 20	V	
V_{GSM}	Transient	± 30	V	
I_{D25}	$T_c = 25^\circ\text{C}$, Chip capability	72	A	
I_{DM}	$T_c = 25^\circ\text{C}$, Note 1	320	A	
I_{AR}	$T_c = 25^\circ\text{C}$	80	A	
E_{AR}	$T_c = 25^\circ\text{C}$	64	mJ	
E_{AS}	$T_c = 25^\circ\text{C}$	6	J	
dv/dt	$I_S \leq I_{DM}$, $di/dt \leq 100 \text{ A}/\mu\text{s}$, $V_{DD} \leq V_{DSS}$ $T_J \leq 150^\circ\text{C}$, $R_G = 2 \Omega$	5	V/ns	
P_D	$T_c = 25^\circ\text{C}$	580	W	
T_J		-40 ... +150	$^\circ\text{C}$	
T_{JM}		150	$^\circ\text{C}$	
T_{stg}		-40 ... +150	$^\circ\text{C}$	
V_{ISOL}	50/60 Hz, RMS $t = 1 \text{ min}$ $I_{ISOL} \leq 1 \text{ mA}$ $t = 1 \text{ s}$	2500 3000	V~ V~	
M_d	Mounting torque Terminal connection torque	1.5/13	Nm/lb.in. 1.5/13	Nm/lb.in.
Weight		19	g	

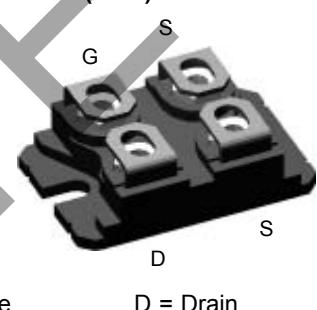
Symbol	Test Conditions	Characteristic Values ($T_J = 25^\circ\text{C}$, unless otherwise specified)		
		min.	typ.	max.
V_{DSS}	$V_{GS} = 0 \text{ V}$, $I_D = 3 \text{ mA}$	500		V
$V_{GS(th)}$	$V_{DS} = V_{GS}$, $I_D = 8 \text{ mA}$	2.5		V
I_{GSS}	$V_{GS} = \pm 20 \text{ V}_{DC}$, $V_{DS} = 0$		± 200	nA
I_{DSS}	$V_{DS} = V_{DSS}$ $V_{GS} = 0 \text{ V}$	$T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$	100 2	μA mA
$R_{DS(on)}$	$V_{GS} = 10 \text{ V}$, $I_D = I_T$ Note 2		55	$\text{m}\Omega$

IXFE 80N50



$V_{DSS} = 500 \text{ V}$
 $I_{D25} = 72 \text{ A}$
 $R_{DS(on)} = 55 \text{ m}\Omega$

ISOPLUS 227™(IXFE)



G = Gate
S = Source
D = Drain

Either Source terminal at miniBLOC can be used as Main or Kelvin Source

Features

- Conforms to SOT-227B outline
- Low $R_{DS(on)}$ HDMOS™ process
- Rugged polysilicon gate cell structure
- Unclamped Inductive Switching (UIS) rated
- Low package inductance
- Fast intrinsic Rectifier

Applications

- DC-DC converters
- Battery chargers
- Switched-mode and resonant-mode power supplies
- DC choppers
- Temperature and lighting controls

Advantages

- Low cost
- Easy to mount
- Space savings
- High power density

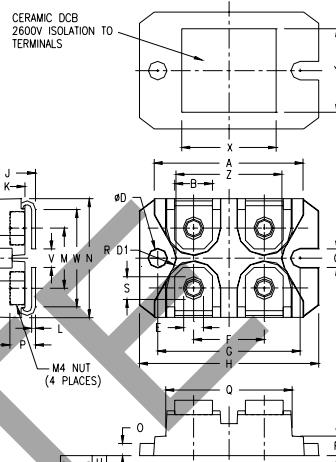
Symbol	Test Conditions	Characteristic Values		
		min.	typ.	max.
g_{fs}	$V_{DS} = 15 \text{ V}$; $I_D = I_T$, Note 2	50	70	S
C_{iss}	$V_{GS} = 0 \text{ V}$, $V_{DS} = 25 \text{ V}$, $f = 1 \text{ MHz}$	9890	pF	
C_{oss}		1750	pF	
C_{rss}		460	pF	
$t_{d(on)}$	$V_{GS} = 10 \text{ V}$, $V_{DS} = 0.5 \cdot V_{DSS}$, $I_D = I_T$ $R_G = 1 \Omega$ (External),	61	ns	
t_r		70	ns	
$t_{d(off)}$		102	ns	
t_f		27	ns	
$Q_{G(on)}$	$V_{GS} = 10 \text{ V}$, $V_{DS} = 0.5 \cdot V_{DSS}$, $I_D = I_T$	380	nC	
Q_{GS}		80	nC	
Q_{GD}		173	nC	
R_{thJC}		0.22	K/W	
R_{thCK}		0.07	K/W	

Source-Drain Diode

Symbol	Test Conditions	Characteristic Values		
		min.	typ.	max.
I_s	$V_{GS} = 0 \text{ V}$		80	A
I_{SM}	Repetitive; pulse width limited by T_{JM}		320	A
V_{SD}	$I_F = I_s$, $V_{GS} = 0 \text{ V}$, Pulse test, $t \leq 300 \mu\text{s}$, duty cycle $d \leq 2\%$		1.3	V
t_{rr}	$I_F = 25 \text{ A}$, $-di/dt = 100 \text{ A}/\mu\text{s}$, $V_R = 100 \text{ V}$	1.2	250	ns
Q_{RM}		8	μC	
I_{RM}			A	

Notes: 1. Pulse width limited by T_{JM} .
 2. Pulse test, $t \leq 300 \text{ ms}$, duty cycle $d \leq 2\%$.
 3. I_T Test current: $I_T = 40 \text{ A}$

ISOPLUS-227 B



SYM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	1.240	1.270	31.50	32.26
B	.310	.330	7.87	8.38
C	.155	.165	3.94	4.19
D	.155	.165	3.94	4.19
D1	.150	.157	3.81	3.98
E	.160	.168	4.06	4.27
F	.587	.595	14.91	15.11
G	1.186	1.193	30.12	30.30
H	1.489	1.505	37.80	38.23
J	.465	.481	11.81	12.22
K	.370	.380	9.40	9.65
L	.030	.033	0.76	0.84
M	.496	.506	12.60	12.85
N	.990	1.001	25.15	25.42
O	.100	.105	2.54	2.67
P	.195	.235	4.95	5.97
Q	1.045	1.059	26.54	26.90
R	.160	.170	4.06	4.32
S	.186	.191	4.72	4.85
T	.968	.987	24.59	25.07
U	-.001	.002	-0.03	0.05
V	.130	.160	3.30	4.06
W	.780	.830	19.81	21.08
X	.770	.810	19.56	20.57
Y	.680	.720	17.27	18.29
Z	.885	.892	22.48	22.66