



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 MOSFET

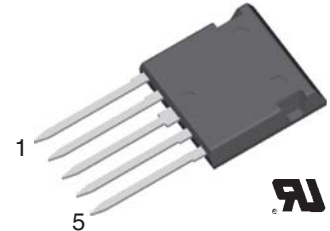
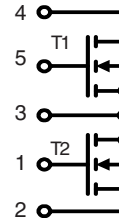
Common Source Topology
in ISOPLUS i4-PAC™

$$I_{D25} = 75 \text{ A}$$

$$V_{DSS} = 100 \text{ V}$$

$$R_{DSon typ.} = 18 \text{ m}\Omega$$

Preliminary data



MOSFET T1/T2				
Symbol	Conditions	Maximum Ratings		
V_{DSS}	$T_{VJ} = 25^{\circ}\text{C}$ to 150°C	100	V	
V_{GS}		± 20	V	
I_{D25}	$T_C = 25^{\circ}\text{C}$	75	A	
I_{D90}	$T_C = 90^{\circ}\text{C}$	50	A	
I_{F25}	(body diode) $T_C = 25^{\circ}\text{C}$	100	A	
I_{F90}	(body diode) $T_C = 90^{\circ}\text{C}$	60	A	
dv/dt	$V_{DS} < V_{DSS}$; $I_F \leq 300\text{A}$; $ di_F/dt \leq 100\text{A}/\mu\text{s}$; $R_G = 2\ \Omega$ $T_{VJ} = 150^{\circ}\text{C}$	5	V/ns	
E_{AR}	$T_C = 25^{\circ}\text{C}$	30	mJ	
Symbol	Conditions	Characteristic Values ($T_{VJ} = 25^{\circ}\text{C}$, unless otherwise specified)		
		min.	typ.	max.
R_{DSon}	$V_{GS} = 10\text{ V}$; $I_D = I_{D90}$		18	25 m Ω
V_{GSth}	$V_{DS} = 20\text{ V}$; $I_D = 4\text{ mA}$	2		4 V
I_{DSS}	$V_{DS} = V_{DSS}$; $V_{GS} = 0\text{ V}$; $T_{VJ} = 25^{\circ}\text{C}$ $T_{VJ} = 125^{\circ}\text{C}$		0.25	0.3 mA mA
I_{GSS}	$V_{GS} = \pm 20\text{ V}$; $V_{DS} = 0\text{ V}$			200 nA
Q_g Q_{gs} Q_{gd}	$V_{GS} = 10\text{ V}$; $V_{DS} = 0.5 \cdot V_{DSS}$; $I_D = I_{D90}$		180	nC
			35	nC
			85	nC
$t_{d(on)}$ t_r $t_{d(off)}$ t_f	$V_{GS} = 10\text{ V}$; $V_{DS} = 0.5 \cdot V_{DSS}$ $I_D = I_{D90}$; $R_G = 2\ \Omega$		20	ns
			60	ns
			80	ns
			60	ns
V_F	(body diode) $I_F = 75\text{ A}$; $V_{GS} = 0\text{ V}$		1.2	1.5 V
t_{rr}	(body diode) $I_F = 37.5\text{A}$; $-di/dt = 100\text{A}/\mu\text{s}$; $V_{DS} = 25\text{V}$		300	ns
R_{thJC} R_{thJH}	with heat transfer paste		0.93	0.5 K/W K/W

Features

- HiPerFET™ technology
 - low R_{DSon}
 - low gate charge for high frequency operation
 - unclamped inductive switching (UIS) capability
 - dv/dt ruggedness
 - fast intrinsic reverse diode
- ISOPLUS i4-PAC™ package
 - isolated back surface
 - low coupling capacity between pins and heatsink
 - enlarged creepage towards heatsink
 - application friendly pinout
 - low inductive current path
 - high reliability
 - industry standard outline
 - UL registered E 72873

Applications

- drives and power supplies
- battery or fuel cell powered
- automotive, industrial vehicle etc.
- secondary side of mains power supplies

IXYS reserves the right to change limits, test conditions and dimensions.

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Component

Symbol	Conditions	Maximum Ratings	
T_{VJ}		-55...+150	°C
T_{stg}		-55...+125	°C
V_{ISOL}	$I_{ISOL} \leq 1 \text{ mA}; 50/60 \text{ Hz}$	2500	V~
F_c	mounting force with clip	20...120	N

Symbol	Conditions	Characteristic Values		
		min.	typ.	max.
C_p	coupling capacity between shorted pins and mounting tab in the case		40	pF
d_s, d_A	pin - pin	1.7		mm
d_s, d_A	pin - backside metal	5.5		mm
Weight				

Dimensions in mm (1 mm = 0.0394")
