



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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Trench Power MOSFET

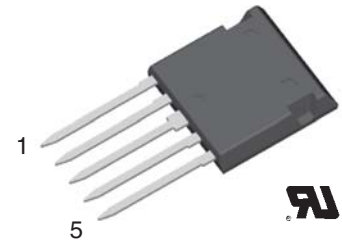
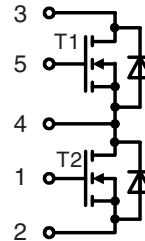
Phaseleg Topology
in ISOPLUS i4-PAC™

$$I_{D25} = 300 \text{ A}$$

$$V_{DSS} = 55 \text{ V}$$

$$R_{DSon typ.} = 2.7 \text{ m}\Omega$$

Preliminary data



MOSFET T1/T2

Symbol	Conditions	Maximum Ratings	
V_{DSS}	$T_{VJ} = 25^{\circ}\text{C}$ to T_{VJmax}	55	V
V_{GS}		± 20	V
I_{D25}	$T_C = 25^{\circ}\text{C}$	300	A
I_{D90}	$T_C = 90^{\circ}\text{C}$	220	A
I_{F25}	(body diode) $T_C = 25^{\circ}\text{C}$	240	A
I_{F90}	(body diode) $T_C = 90^{\circ}\text{C}$	150	A

Symbol	Conditions	Characteristic Values ($T_{VJ} = 25^{\circ}\text{C}$, unless otherwise specified)		
		min.	typ.	max.
R_{DSon}	$V_{GS} = 10 \text{ V}; I_D = 150 \text{ A}$		2.7	3.6 m Ω
V_{GSth}	$V_{DS} = 20 \text{ V}; I_D = 2 \text{ mA}$	2		4 V
I_{DSS}	$V_{DS} = 55 \text{ V}; V_{GS} = 0 \text{ V}; T_{VJ} = 25^{\circ}\text{C}$ $T_{VJ} = 125^{\circ}\text{C}$		0.2	2 μA mA
I_{GSS}	$V_{GS} = \pm 20 \text{ V}; V_{DS} = 0 \text{ V}$			200 nA
Q_g Q_{gs} Q_{gd}	$V_{GS} = 10 \text{ V}; V_{DS} = 44 \text{ V}; I_D = 50 \text{ A}$		172 36 50	nC nC nC
$t_{d(on)}$ t_r $t_{d(off)}$ t_f	$V_{GS} = 10 \text{ V}; V_{DS} = 30 \text{ V}$ $I_D = 50 \text{ A}; R_G = 4.7 \Omega$		25 50 70 40	ns ns ns ns
V_F	(body diode) $I_F = 150 \text{ A}; V_{GS} = 0 \text{ V}$		1.1	1.5 V
t_{rr}	(body diode) $I_F = 40 \text{ A}; -di/dt = 200 \text{ A}/\mu\text{s}; V_{DS} = 30 \text{ V}$		100	ns
R_{thJC} R_{thJH}	with heat transfer paste		1	0.5 K/W K/W

Features

- trench MOSFET
 - very low on state resistance R_{DSon}
 - fast switching
- 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

- automotive
 - AC drives - starter generator for 12/14 V etc.
 - choppers - replacing series resistors for DC drives, heating etc.
 - DC-DC converters - between 12V and 42V system etc.
 - electronic switches -replacing relays and fuses
- power supplies
 - DC-DC converters
 - solar inverters
 - converters for fuel cells
- battery supplied systems
 - choppers or inverters for drives in hand held tools
 - battery chargers

Component

Symbol	Conditions	Maximum Ratings	
I_{RMS}	per pin	75	A
T_{VJ}		-55...+175	°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.
$R_{pin - chip}$			0.5	mΩ
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			9	g

Dimensions in mm (1 mm = 0.0394")
