



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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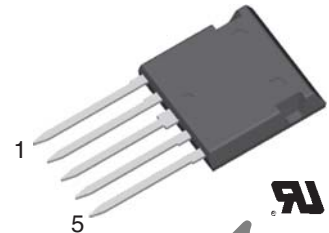
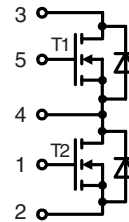


# Trench Power MOSFET

Phaseleg Topology  
in ISOPLUS i4-PAC™

$$\begin{aligned} I_{D25} &= 65 \text{ A} \\ V_{DSS} &= 150 \text{ V} \\ R_{DSon typ.} &= 12 \text{ m}\Omega \end{aligned}$$

Preliminary data



## MOSFET T1/T2

Symbol	Conditions	Maximum Ratings	
$V_{DSS}$	$T_{VJ} = 25^{\circ}\text{C}$ to $T_{VJmax}$	150	V
$V_{GS}$		$\pm 20$	V
$I_{D25}$	$T_C = 25^{\circ}\text{C}$	65	A
$I_{D90}$	$T_C = 90^{\circ}\text{C}$	50	A
$I_{F25}$	(body diode) $T_C = 25^{\circ}\text{C}$	65	A
$I_{F90}$	(body diode) $T_C = 90^{\circ}\text{C}$	50	A

Symbol	Conditions	Characteristic Values ( $T_{VJ} = 25^{\circ}\text{C}$ , unless otherwise specified)		
		min.	typ.	max.
$R_{DSon}$	$V_{GS} = 10 \text{ V}; I_D = I_{D90}$		12	22 m $\Omega$
$V_{GSth}$	$V_{DS} = 20 \text{ V}; I_D = 1 \text{ mA}$	2		4 V
$I_{DSS}$	$V_{DS} = V_{DSS}; V_{GS} = 0 \text{ V}; T_{VJ} = 25^{\circ}\text{C}$ $T_{VJ} = 125^{\circ}\text{C}$		0.1	10 $\mu\text{A}$ mA
$I_{GSS}$	$V_{GS} = \pm 20 \text{ V}; V_{DS} = 0 \text{ V}$			200 nA
$Q_g$ $Q_{gs}$ $Q_{gd}$	$V_{GS} = 10 \text{ V}; V_{DS} = 120 \text{ V}; I_D = 75 \text{ A}$		230 45 90	nC nC nC
$t_{d(on)}$ $t_r$ $t_{d(off)}$ $t_f$	$V_{GS} = 10 \text{ V}; V_{DS} = 0.5 \cdot V_{DSS}$ $I_D = 30 \text{ A}; R_G = 5.6 \Omega$		35 80 230 100	ns ns ns ns
$V_F$	(body diode) $I_F = 32.5 \text{ A}; V_{GS} = 0 \text{ V}$		0.9	1.3 V
$t_{rr}$	(body diode) $I_F = 20 \text{ A}; -di/dt = 100 \text{ A}/\mu\text{s}; V_{DS} = 30 \text{ V}$		130	ns
$R_{thJC}$ $R_{thJH}$	with heat transfer paste		1.2	0.6 K/W K/W

## Features

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

- automotive and industrial vehicles
  - AC drives
  - choppers - replacing series resistors for DC drives, heating etc.
  - DC-DC converters
  - electronic switches -replacing relays and fuses
- power supplies
  - DC-DC converters
  - solar inverters
- battery supplied systems
  - choppers or inverters for drives
  - 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 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		9		g

## Dimensions in mm (1 mm = 0.0394")

