



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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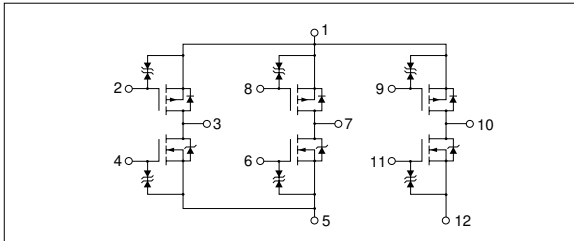


Absolute maximum ratings

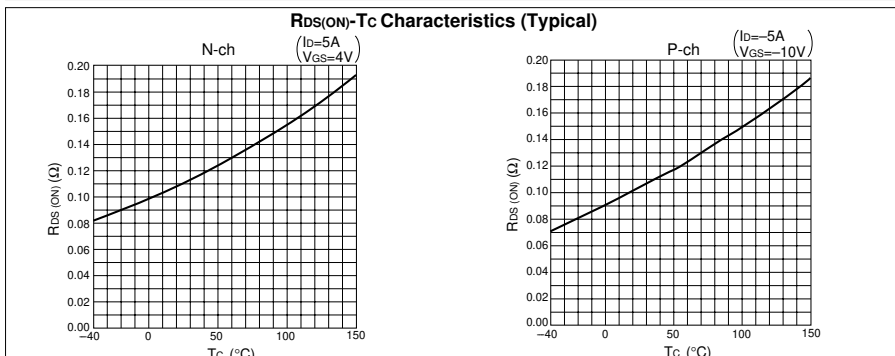
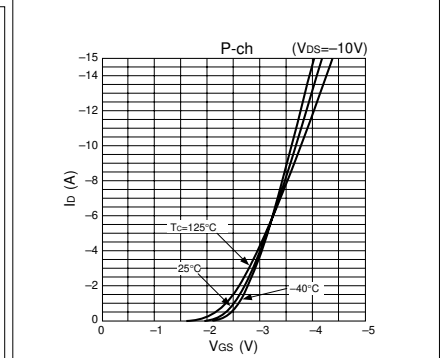
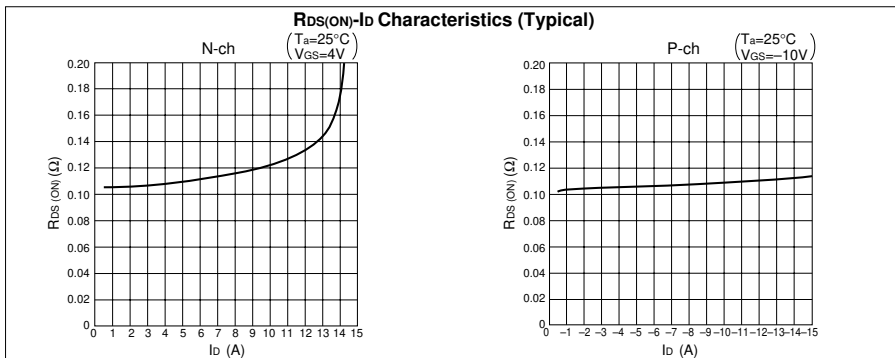
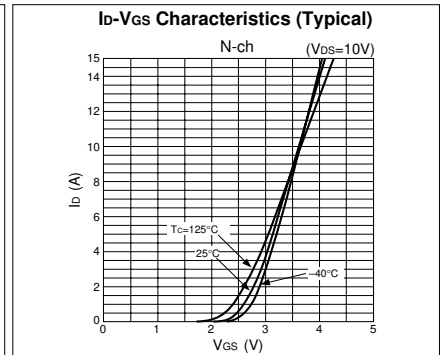
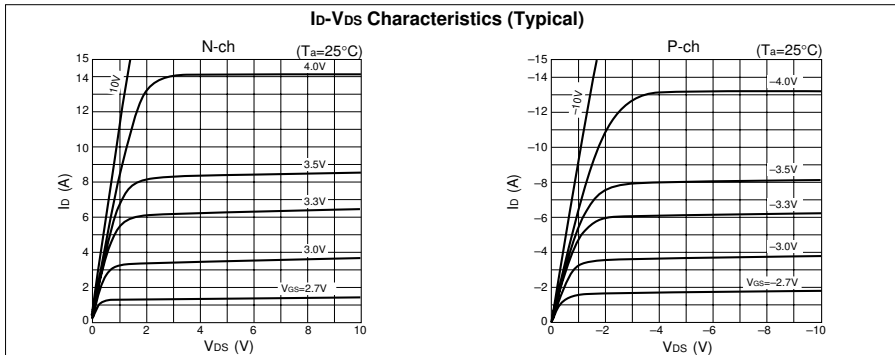
($T_a=25^\circ\text{C}$)

Symbol	Ratings		Unit
	N channel	P channel	
V_{DS}	60	-60	V
V_{GS}	± 20	± 20	V
I_D	10	-6	A
$I_{D(\text{pulse})}$	15 (PW \leq 1ms, duty \leq 25%)	-15 (PW \leq 1ms, duty \leq 25%)	A
P_T	5 ($T_a=25^\circ\text{C}$, with all circuits operating, without heatsink)		W
	40 ($T_c=25^\circ\text{C}$, with all circuits operating, with infinite heatsink)		W
θ_{j-a}	25 (Junction-Air, $T_a=25^\circ\text{C}$, with all circuits operating)		$^\circ\text{C}/\text{W}$
θ_{j-c}	3.125 (Junction-Case, $T_c=25^\circ\text{C}$, with all circuits operating)		$^\circ\text{C}/\text{W}$
V_{ISO}	1000 (Between fin and lead pin, AC)		Vrms
T_{ch}	150		$^\circ\text{C}$
T_{stg}	-40 to +150		$^\circ\text{C}$

Equivalent circuit diagram



Characteristic curves



Electrical characteristics

(Ta=25°C)

Symbol	N channel					P channel				
	Specification			Unit	Conditions	Specification			Unit	Conditions
	min	typ	max			min	typ	max		
V _{(BR)DSS}	60			V	I _D =100μA, V _{GS} =0V	-60			V	I _D =-100μA, V _{GS} =0V
I _{GSS}			±10	μA	V _{GS} =±20V			±10	μA	V _{GS} =±20V
I _{DSS}			100	μA	V _{DS} =60V, V _{GS} =0V			-100	μA	V _{DS} =-60V, V _{GS} =0V
V _{TH}	1.0		2.0	V	V _{DS} =10V, I _D =250μA	-1.0		-2.0	V	V _{DS} =-10V, I _D =-250μA
Re _(yfs)		8		S	V _{DS} =10V, I _D =5A		8.7		S	V _{DS} =-10V, I _D =-5A
R _{DS(ON)}			0.14	Ω	V _{GS} =4V, I _D =5A			0.14	Ω	V _{GS} =-10V, I _D =-5A
C _{iss}		460		pF	V _{DS} =10V, f=1.0MHz, V _{GS} =0V		1200		pF	V _{DS} =-10V, f=1.0MHz, V _{GS} =0V
C _{oss}		225		pF			440		pF	
C _{rss}		50		pF			120		pF	
td _(on)		25		ns	I _D =5A, V _{DD} =20V, R _L =4Ω, V _{GS} =5V, see Fig. 3 on page 16.		50		ns	I _D =-5A, V _{DD} =20V, R _L =4Ω, V _{GS} =-5V see Fig. 4 on page 16.
t _r		110		ns			170		ns	
td _(off)		90		ns			180		ns	
t _f		55		ns			100		ns	
V _{SD}		1.15		V		I _{SD} =10A, V _{GS} =0V		-1.25		
t _{rr}		75		ns	I _{SD} =5A, V _{GS} =0V di/dt=100A/μs		100		ns	I _{SD} =-5A, V _{GS} =0V di/dt=100A/μs

Characteristic curves

