

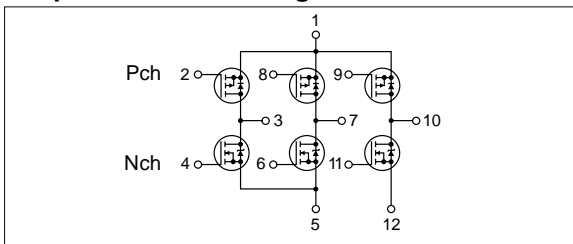
Absolute maximum ratings

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

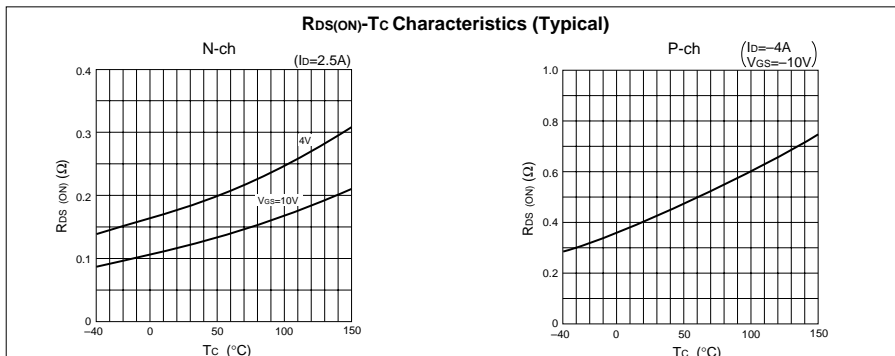
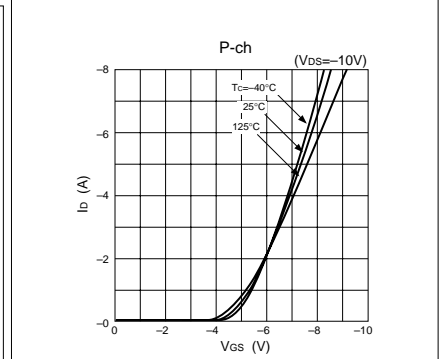
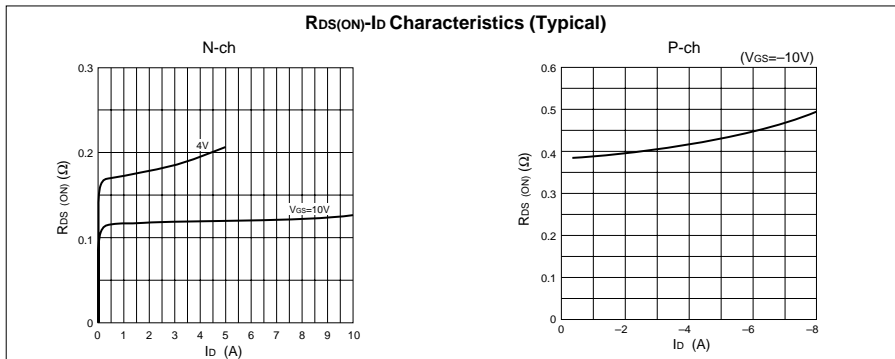
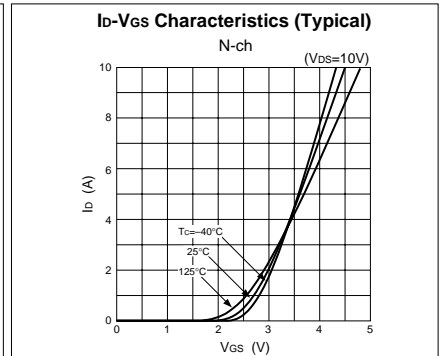
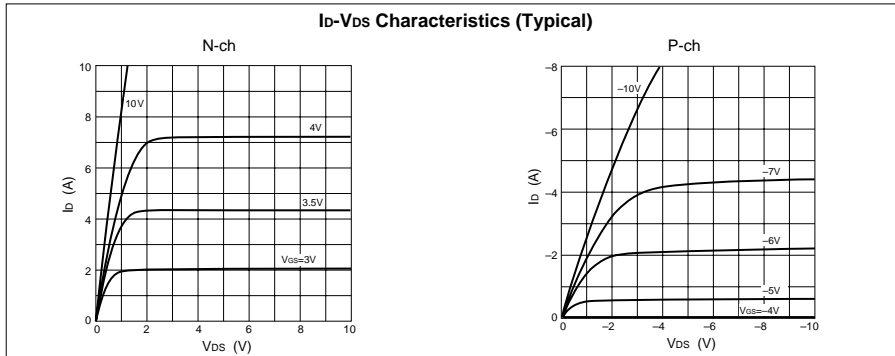
Symbol	Ratings		Unit
	N channel	P channel	
V_{BSS}	60	-60	V
V_{GSS}	± 10	∓ 20	V
I_D	± 5	∓ 4	A
$I_{D(\text{pulse})}$	± 10 ($PW \leq 1\text{ms}$)	∓ 8 ($PW \leq 1\text{ms}$)	A
E_{AS}^*	2	—	mJ
P_T	5 ($T_a=25^\circ\text{C}$, with all circuits operating, without heatsink)		W
	35 ($T_c=25^\circ\text{C}$, with all circuits operating, with infinite heatsink)		W
θ_{j-a}	25 (Junction-Air, $T_a=25^\circ\text{C}$, with all circuits operating)		$^\circ\text{C/W}$
θ_{j-c}	3.57 (Junction-Case, $T_c=25^\circ\text{C}$, with all circuits operating)		$^\circ\text{C/W}$
V_{ISO}	1000 (Between fin and lead pin, AC)		V _{rms}
T_{ch}	150		$^\circ\text{C}$
T_{stg}	-40 to +150		$^\circ\text{C}$

* : $V_{DD}=20\text{V}$, $L=1\text{mH}$, $I_D=2\text{A}$, unclamped, see Fig. E on page 15.

Equivalent circuit diagram



Characteristic curves



Electrical characteristics

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

Symbol	N channel					P channel				
	Specification			Unit	Conditions	Specification			Unit	Conditions
	min	typ	max			min	typ	max		
$V_{(BR)DSS}$	60			V	$I_D=250\mu\text{A}, V_{GS}=0\text{V}$	-60			V	$I_D=-250\mu\text{A}, V_{GS}=0\text{V}$
I_{GSS}			± 500	nA	$V_{GS}=\pm 10\text{V}$			∓ 500	nA	$V_{GS}=\mp 20\text{V}$
I_{DSS}			250	μA	$V_{DS}=60\text{V}, V_{GS}=0\text{V}$			-250	μA	$V_{DS}=-60\text{V}, V_{GS}=0\text{V}$
V_{TH}	1.0		2.0	V	$V_{DS}=10\text{V}, I_D=250\mu\text{A}$	-2.0		-4.0	V	$V_{DS}=-10\text{V}, I_D=-250\mu\text{A}$
$R_{e(yfs)}$	3.1	4.6		S	$V_{DS}=10\text{V}, I_D=5\text{A}$	1.6	2.2		S	$V_{DS}=-10\text{V}, I_D=-4\text{A}$
$R_{DS(ON)}$		0.17	0.22	Ω	$V_{GS}=10\text{V}, I_D=5\text{A}$		0.38	0.55	Ω	$V_{GS}=-10\text{V}, I_D=-4\text{A}$
		0.25	0.30	Ω	$V_{GS}=4\text{V}, I_D=5\text{A}$				Ω	$V_{GS}=-10\text{V}, I_D=-4\text{A}$
C_{iss}		400		pF	$V_{DS}=25\text{V}, f=1.0\text{MHz}$		270		pF	$V_{DS}=-25\text{V}, f=1.0\text{MHz}$
C_{oss}		160		pF	$V_{GS}=0\text{V}$		170		pF	$V_{GS}=0\text{V}$
t_{on}		80		ns	$I_D=5\text{A}, V_{DD}\approx 30\text{V}, V_{GS}=5\text{V}$		60		ns	$I_D=-4\text{A}, V_{DD}\approx -30\text{V}, V_{GS}=-10\text{V}$
t_{off}		50		ns	see Fig. 3 on page 16.		60		ns	see Fig. 4 on page 16.
V_{SD}		1.1	1.5	V	$I_{SD}=5\text{A}, V_{GS}=0\text{V}$		-4.4	-5.5	V	$I_{SD}=-4\text{A}, V_{GS}=0\text{V}$
t_{rr}		150		ns	$I_{SD}=\pm 100\text{mA}$		150		ns	$I_{SD}=\mp 100\text{mA}$

Characteristic curves

