

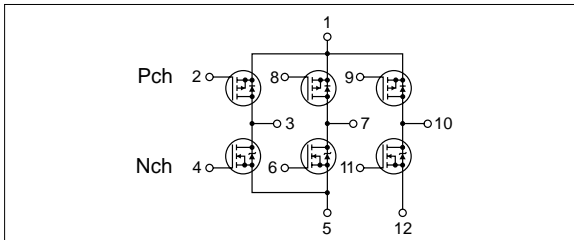
Absolute maximum ratings

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

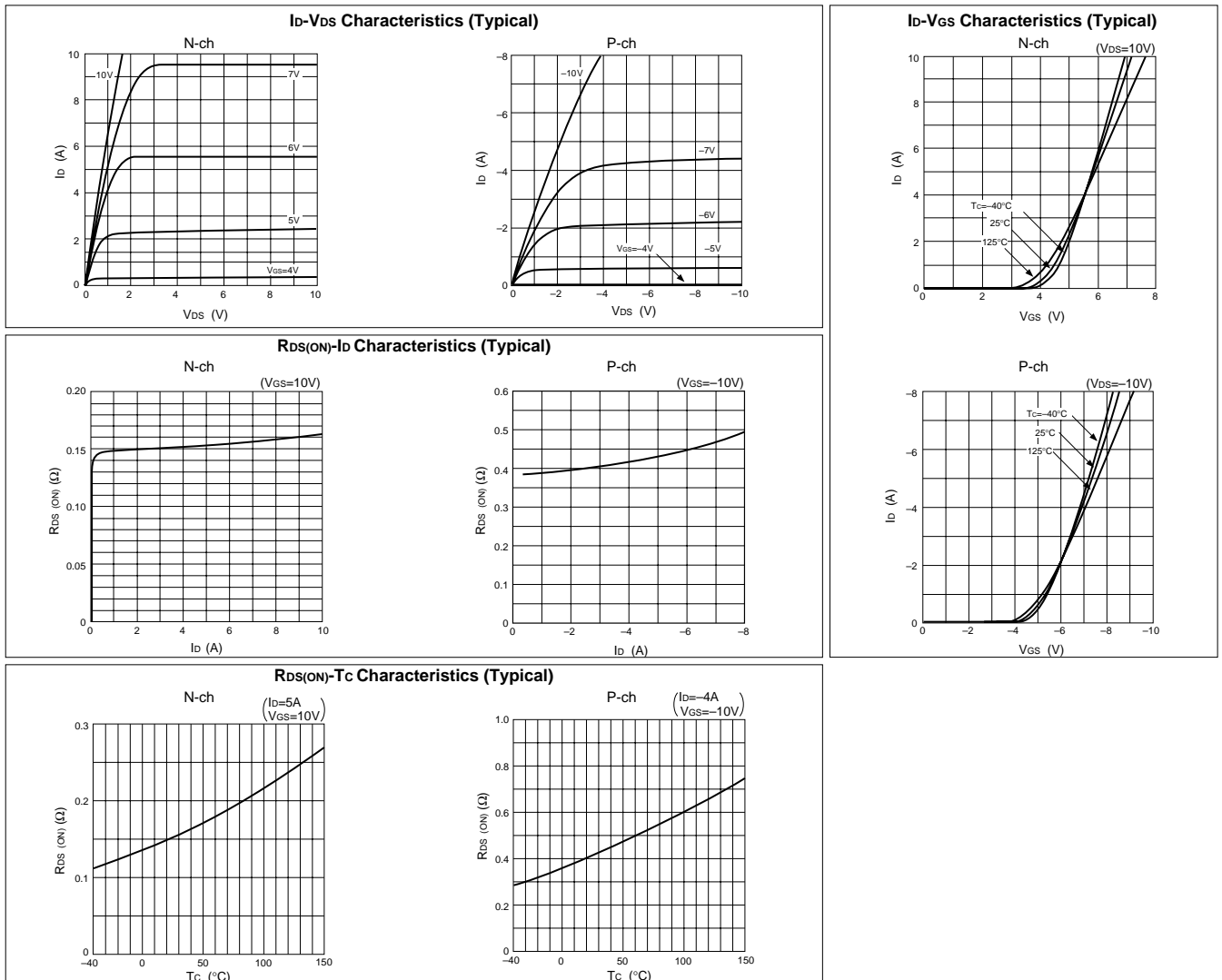
Symbol	Ratings		Unit
	N channel	P channel	
V_{DSS}	60	-60	V
V_{GSS}	± 20	∓ 20	V
I_D	± 5	∓ 4	A
$I_{D(pulse)}$	± 10 ($PW \leq 1\text{ms}$)	∓ 8 ($PW \leq 1\text{ms}$)	A
E_{AS}^*	2	—	mJ
P_T	4 ($T_a=25^\circ\text{C}$, with all circuits operating, without heatsink)		W
	28 ($T_c=25^\circ\text{C}$, with all circuits operating, with infinite heatsink)		W
θ_{j-a}	31.2 (Junction-Air, $T_a=25^\circ\text{C}$, with all circuits operating)		$^\circ\text{C/W}$
θ_{j-c}	4.46 (Junction-Case, $T_c=25^\circ\text{C}$, with all circuits operating)		$^\circ\text{C/W}$
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	$V_{GS}=\pm 20\text{V}$			∓ 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}	2.0		4.0	V	$V_{DS}=10\text{V}$, $I_D=250\mu\text{A}$	-2.0		-4.0	V	$V_{DS}=-10\text{V}$, $I_D=-250\mu\text{A}$
$Re_{(yfs)}$	2.2	3.3		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	$V_{GS}=-10\text{V}$, $I_D=-4\text{A}$
C_{iss}		300		pF	$V_{DS}=25\text{V}$, $f=1.0\text{MHz}$, $V_{GS}=0\text{V}$		270		pF	$V_{DS}=-25\text{V}$, $f=1.0\text{MHz}$, $V_{GS}=0\text{V}$
C_{oss}		160		pF			170		pF	
t_{on}		35		ns	$I_D=5\text{A}$, $V_{DD}\div 30\text{V}$, $V_{GS}=10\text{V}$,		60		ns	$I_D=-4\text{A}$, $V_{DD}\div -30\text{V}$, $V_{GS}=-10\text{V}$,
t_{off}		35		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}		140		ns	$I_{SD}=\pm 100\text{mA}$		150		ns	$I_{SD}=\mp 100\text{mA}$

Characteristic curves

