

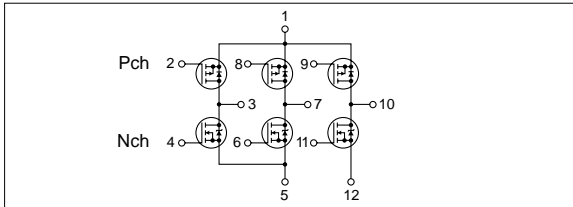
### Absolute maximum ratings

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

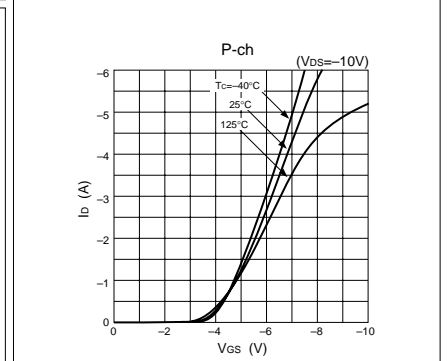
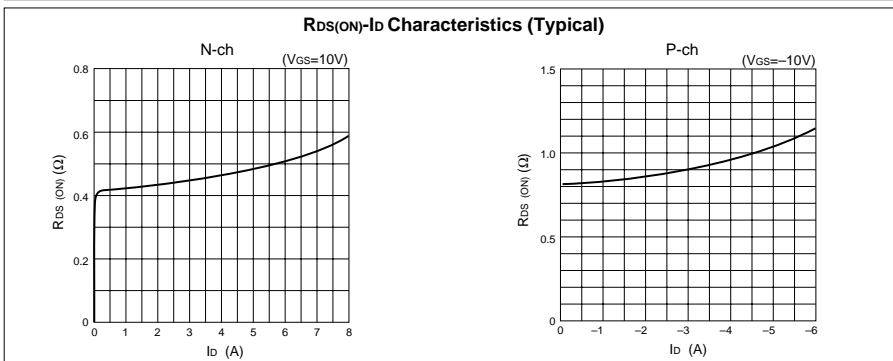
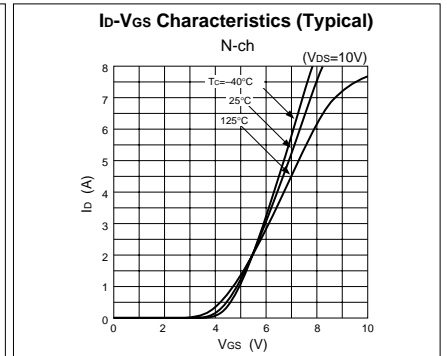
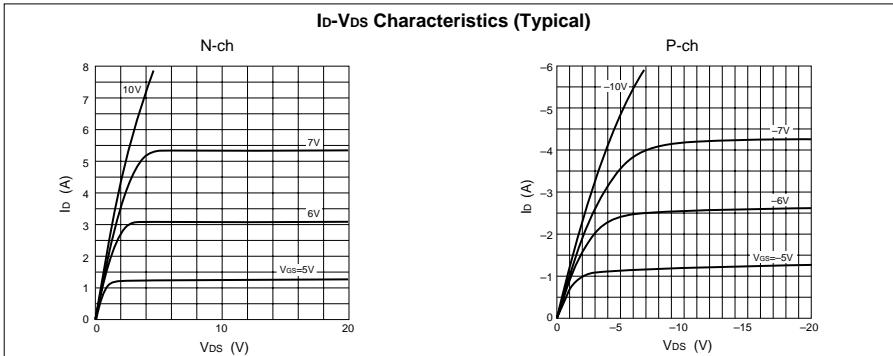
Symbol	Ratings		Unit
	N channel	P channel	
$V_{DSS}$	100	-100	V
$V_{GSS}$	$\pm 20$	$\mp 20$	V
$I_D$	$\pm 4$	$\mp 3$	A
$I_{D(pulse)}$	$\pm 8$ ( $PW \leq 1\text{ms}$ )	$\mp 6$ ( $PW \leq 1\text{ms}$ )	A
$E_{AS^*}$	16	—	mJ
$P_T$	5 ( $T_a=25^\circ\text{C}$ , with all circuits operating, without heatsink)		W
	35 ( $T_c=25^\circ\text{C}$ , with all circuits operating, with infinite heatsink)		W
$\theta_{j-a}$	25 (Junction-Air, $T_a=25^\circ\text{C}$ , with all circuits operating)		$^\circ\text{C/W}$
$\theta_{j-c}$	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)		Vrms
$T_{ch}$	150		$^\circ\text{C}$
$T_{stg}$	-40 to +150		$^\circ\text{C}$

\* :  $V_{DD}=20\text{V}$ ,  $L=1\text{mH}$ ,  $I_D=5\text{A}$ , 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		
$V_{(BR)DSS}$	100			V	$I_D=250\mu\text{A}$ , $V_{GS}=0\text{V}$	-100			V	$I_D=-250\mu\text{A}$ , $V_{GS}=0\text{V}$
$I_{GSS}$			$\pm 500$	nA	$V_{GS}=\pm 20\text{V}$			$\mp 500$	nA	$V_{GS}=\mp 20\text{V}$
$I_{DSS}$			250	$\mu\text{A}$	$V_{DS}=100\text{V}$ , $V_{GS}=0\text{V}$			-250	$\mu\text{A}$	$V_{DS}=-100\text{V}$ , $V_{GS}=0\text{V}$
$V_{TH}$	2.0		4.0	V	$V_{DS}=10\text{V}$ , $I_D=250\mu\text{A}$	-2.0		-4.0	V	$V_{DS}=-10\text{V}$ , $I_D=-250\mu\text{A}$
$R_{e(yfs)}$	1.1	1.7		S	$V_{DS}=10\text{V}$ , $I_D=4\text{A}$	0.7	1.1		S	$V_{DS}=-10\text{V}$ , $I_D=-3\text{A}$
$R_{DS(ON)}$		0.50	0.60	$\Omega$	$V_{GS}=10\text{V}$ , $I_D=4\text{A}$		1.1	1.3	$\Omega$	$V_{GS}=-10\text{V}$ , $I_D=-3\text{A}$
$C_{iss}$		180		pF	$V_{DS}=25\text{V}$ , $f=1.0\text{MHz}$ , $V_{GS}=0\text{V}$		180		pF	$V_{DS}=-25\text{V}$ , $f=1.0\text{MHz}$ , $V_{GS}=0\text{V}$
$C_{oss}$		82		pF			85		pF	
$t_{on}$		40		ns	$I_D=4\text{A}$ , $V_{DD}=50\text{V}$ , $V_{GS}=10\text{V}$ ,		90		ns	$I_D=-3\text{A}$ , $V_{DD}=-50\text{V}$ , $V_{GS}=-10\text{V}$ ,
$t_{off}$		40		ns	see Fig. 3 on page 16.		80		ns	see Fig. 4 on page 16.
$V_{SD}$		1.2	2.0	V	$I_{SD}=4\text{A}$ , $V_{GS}=0\text{V}$	-4.0	-5.5		V	$I_{SD}=-3\text{A}$
$t_{rr}$		250		ns	$I_{SD}=\pm 100\text{mA}$		250		ns	$I_{SD}=\mp 100\text{mA}$

## Characteristic curves

