

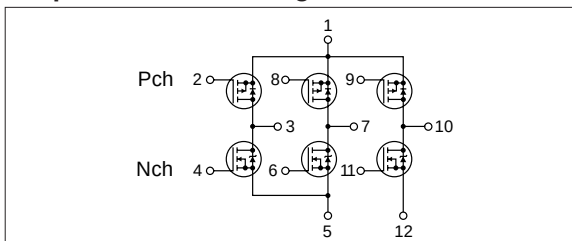
Absolute maximum ratings

(Ta=25°C)

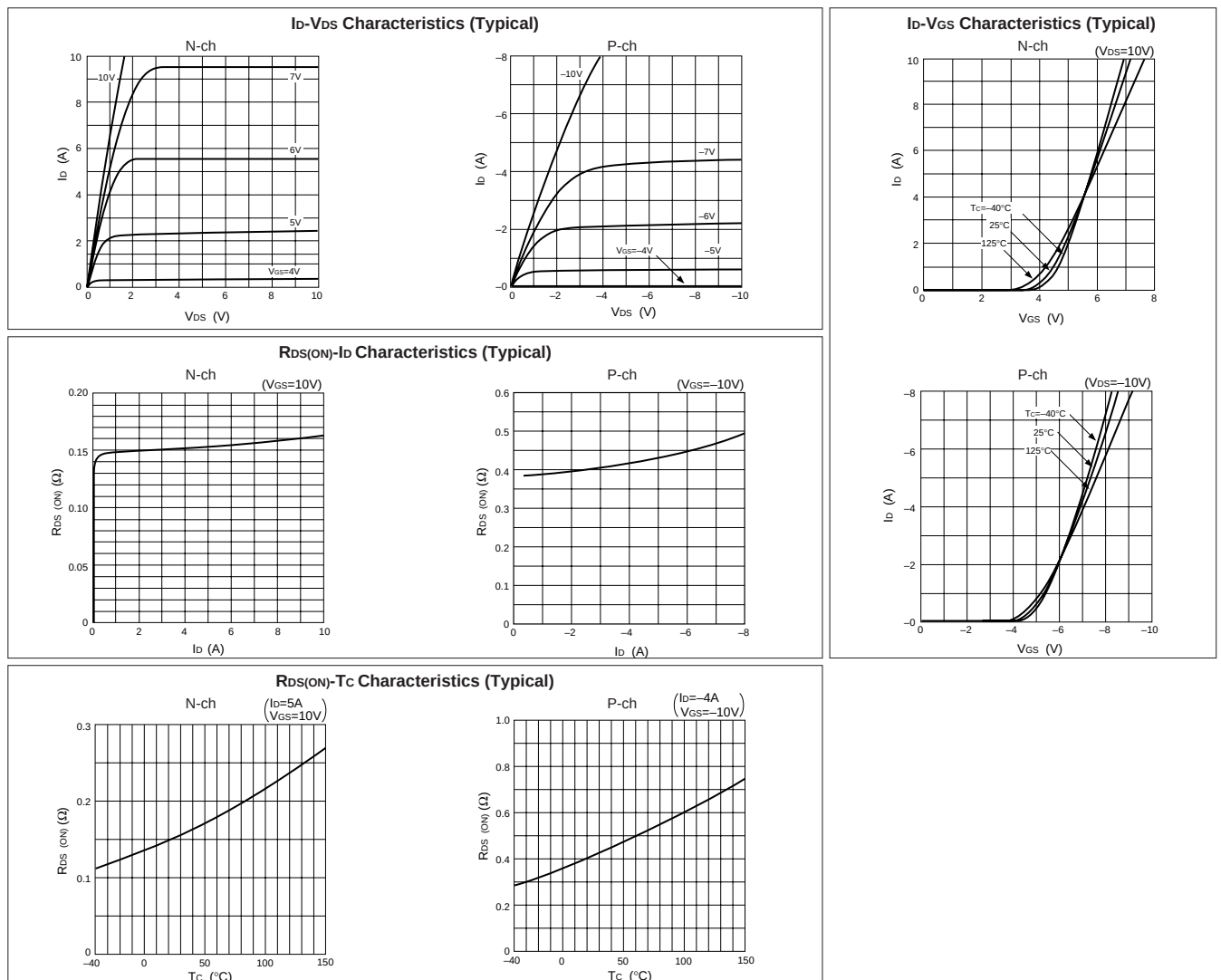
Symbol	Ratings		Unit
	N channel	P channel	
V _{DS}	60	-60	V
V _{GS}	±20	±20	V
I _D	±5	±4	A
I _{D(pulse)}	±10 (PW≤1ms)	±8 (PW≤1ms)	A
E _{AS} *	2	—	mJ
P _T	4 (Ta=25°C, with all circuits operating, without heatsink)		W
	28 (Tc=25°C, with all circuits operating, with infinite heatsink)		W
θ _{j-a}	31.2 (Junction-Air, Ta=25°C, with all circuits operating)		°C/W
θ _{j-c}	4.46 (Junction-Case, Tc=25°C, with all circuits operating)		°C/W
T _{ch}	150		°C
T _{stg}	-40 to +150		°C

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

Equivalent circuit diagram



Characteristic curves



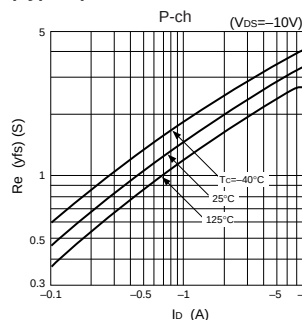
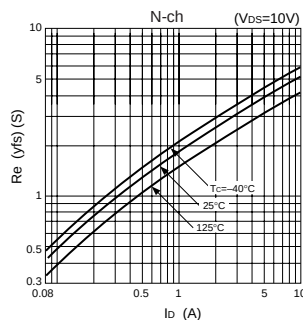
Electrical characteristics

(Ta=25°C)

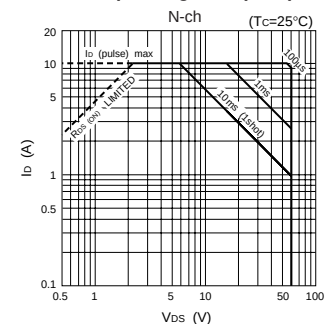
Symbol	N channel					P channel				
	Specification			Unit	Conditions	Specification			Unit	Conditions
	min	typ	max			min	typ	max		
$V_{(BR)DSS}$	60			V	$I_D=250\mu A, V_{GS}=0V$	-60			V	$I_D=-250\mu A, V_{GS}=0V$
I_{GSS}			± 500	nA	$V_{GS}=\pm 20V$			∓ 500	nA	$V_{GS}=\mp 20V$
I_{DSS}			250	μA	$V_{DS}=60V, V_{GS}=0V$			-250	μA	$V_{DS}=-60V, V_{GS}=0V$
V_{TH}	2.0		4.0	V	$V_{DS}=10V, I_D=250\mu A$	-2.0		-4.0	V	$V_{DS}=-10V, I_D=-250\mu A$
$R_{e(yfs)}$	2.2	3.3		S	$V_{DS}=10V, I_D=5A$	1.6	2.2		S	$V_{DS}=-10V, I_D=-4A$
$R_{DS(ON)}$		0.17	0.22	Ω	$V_{GS}=10V, I_D=5A$		0.38	0.55	Ω	$V_{GS}=-10V, I_D=-4A$
C_{iss}		300		pF	$V_{DS}=25V, f=1.0MHz,$ $V_{GS}=0V$		270		pF	$V_{DS}=-25V, f=1.0MHz,$ $V_{GS}=0V$
C_{oss}		160		pF			170		pF	
t_{on}		35		ns	$I_D=5A, V_{DD}\div 30V, V_{GS}=10V,$		60		ns	$I_D=-4A, V_{DD}\div -30V, V_{GS}=-10V,$
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	$I_{SD}=5A, V_{GS}=0V$		-4.4	-5.5	V	$I_{SD}=-4A, V_{GS}=0V$
t_{rr}		140		ns	$I_{SD}=\pm 100mA$		150		ns	$I_{SD}=\mp 100mA$

Characteristic curves

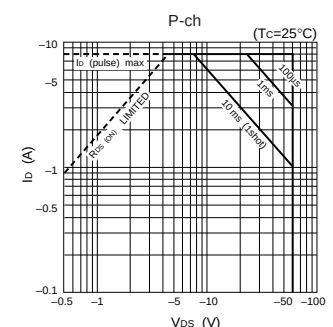
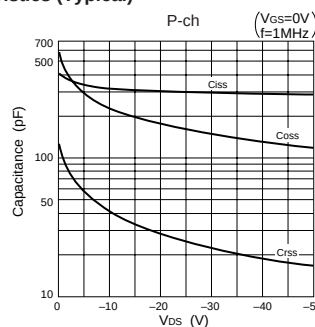
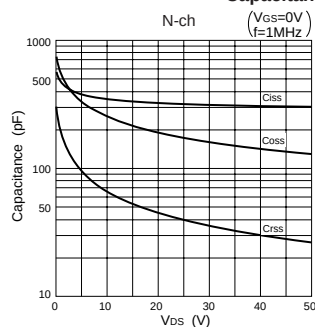
Re(yfs)-Id Characteristics (Typical)



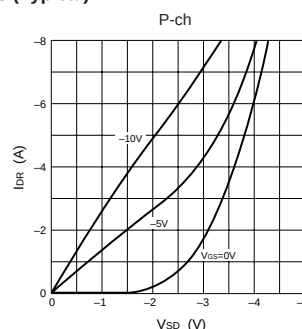
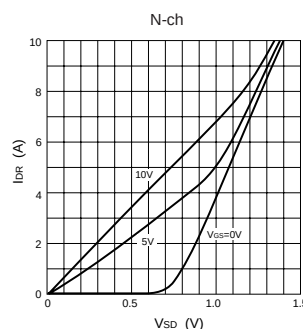
Safe Operating Area (SOA)



Capacitance-Vds Characteristics (Typical)



IDR-VSD Characteristics (Typical)



Pr-Ta Characteristics

