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SLA5060

N-channel + P-channel
 3-phase motor drive

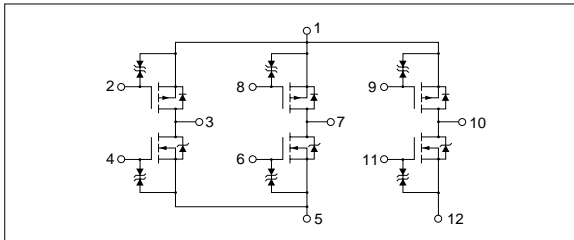
External dimensions SLA (12-pin)

Absolute maximum ratings

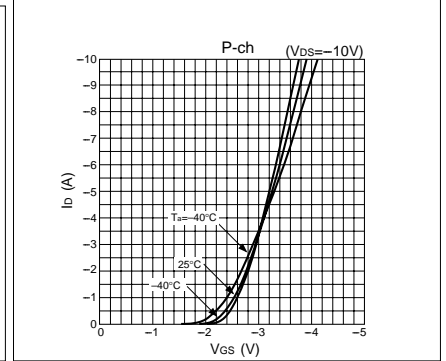
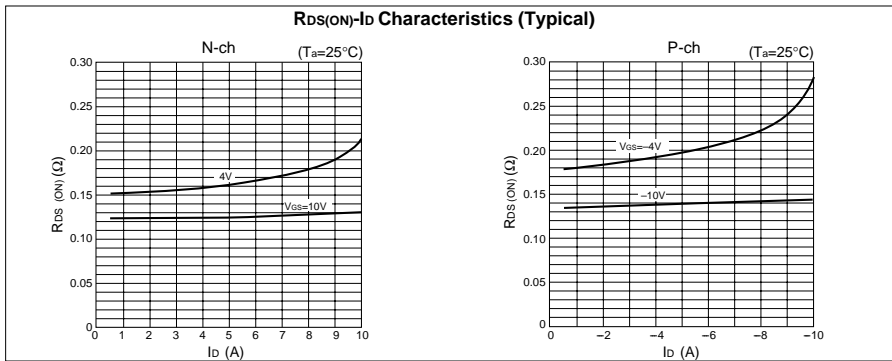
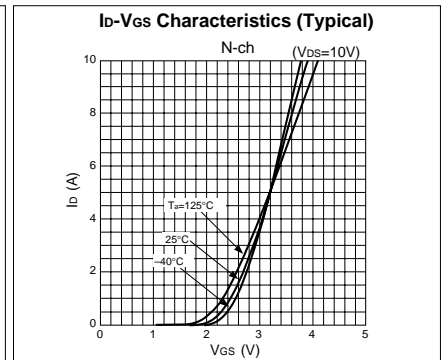
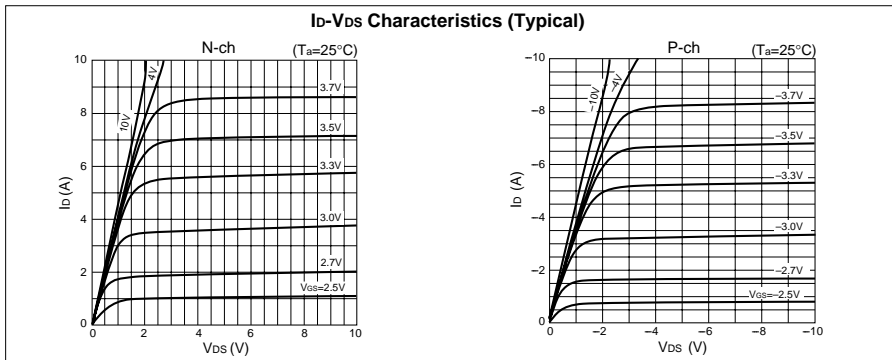
(Ta=25°C)

Symbol	Ratings		Unit
	N channel	P channel	
V _{DSS}	60	-60	V
V _{GSS}	±20	±20	V
I _D	6	-6	A
I _{D(pulse)}	10 (PW≤1ms, duty≤25%) / -10 (PW≤1ms, duty≤25%)		A
P _T	5 (Ta=25°C, with all circuits operating, without heatsink)		W
	35 (Tc=25°C, with all circuits operating, with infinite heatsink)		W
θ _{j-a}	25 (Junction-Air, Ta=25°C, with all circuits operating)		°C/W
θ _{j-c}	3.57 (Junction-Case, Tc=25°C, with all circuits operating)		°C/W
V _{ISO}	1000 (Between fin and lead pin, AC)		V _{rms}
T _{ch}	150		°C
T _{stg}	-40 to +150		°C

Equivalent circuit diagram



Characteristic curves



SLA5060

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	$I_D=100\mu\text{A}, V_{GS}=0\text{V}$	-60			V	$I_D=-100\mu\text{A}, V_{GS}=0\text{V}$
I_{GSS}			± 10	μA	$V_{GS}=\pm 20\text{V}$			± 10	μA	$V_{GS}=\pm 20\text{V}$
I_{DSS}			100	μA	$V_{DS}=60\text{V}, V_{GS}=0\text{V}$			-100	μA	$V_{DS}=-60\text{V}, V_{GS}=0\text{V}$
V_{TH}	1.0		2.0	V	$V_{DS}=10\text{V}, I_D=250\mu\text{A}$	-1.0		-2.0	V	$V_{DS}=-10\text{V}, I_D=-250\mu\text{A}$
$R_{e(yfs)}$		5.5		S	$V_{DS}=10\text{V}, I_D=3\text{A}$		6		S	$V_{DS}=-10\text{V}, I_D=-3\text{A}$
$R_{DS(ON)}$			0.22	Ω	$V_{GS}=4\text{V}, I_D=3\text{A}$			0.22	Ω	$V_{GS}=-10\text{V}, I_D=-3\text{A}$
C_{iss}		320		pF	$V_{DS}=10\text{V}, f=1.0\text{MHz},$ $V_{GS}=0\text{V}$		790		pF	$V_{DS}=-10\text{V}, f=1.0\text{MHz},$ $V_{GS}=0\text{V}$
C_{oss}		160		pF			310		pF	
C_{rss}		35		pF			90		pF	
$t_{d(on)}$		16		ns		$I_D=3\text{A}, V_{DD}=20\text{V},$ $R_L=6.67\Omega, V_{GS}=5\text{V},$ see Fig. 3 on page 16.		40		
t_r		65		ns			110		ns	
$t_{d(off)}$		70		ns			160		ns	
t_f		45		ns			80		ns	
V_{SD}		1.2		V	$I_{SD}=6\text{A}, V_{GS}=0\text{V}$			-1.1		V
t_{rr}		65		ns	$I_{SD}=3\text{A}, V_{GS}=0\text{V},$ $di/dt=100\text{A}/\mu\text{s}$		85		ns	$I_{SD}=-3\text{A}, V_{GS}=0\text{V},$ $di/dt=100\text{A}/\mu\text{s}$

Characteristic curves

