

# SMA5127

查询SMA5127供应商

N-channel + P-channel

捷多邦, 专业PCB打样工厂, 24小时加急出货

3-phase motor drive

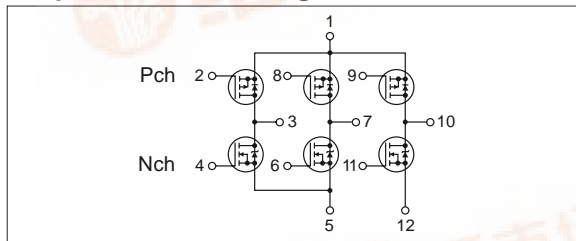
External dimensions **B** SMA

## Absolute maximum ratings

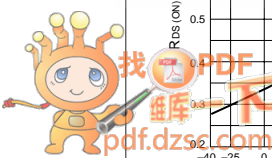
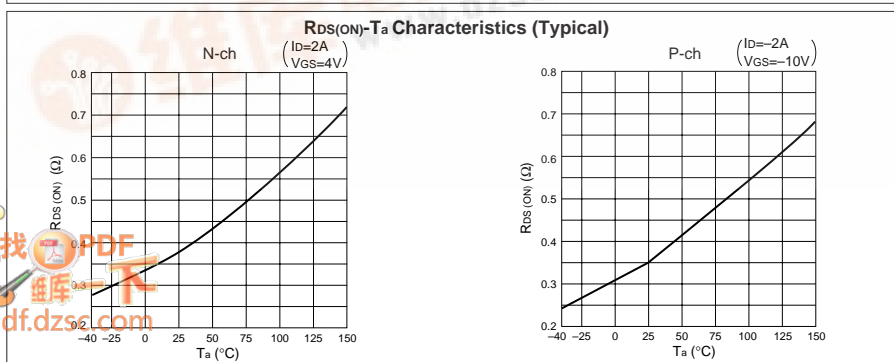
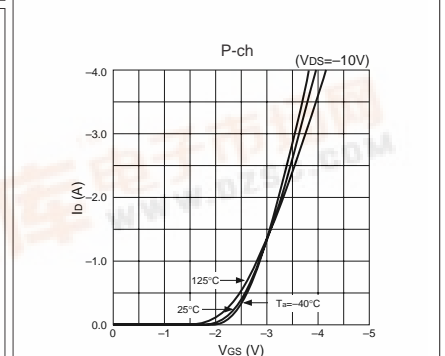
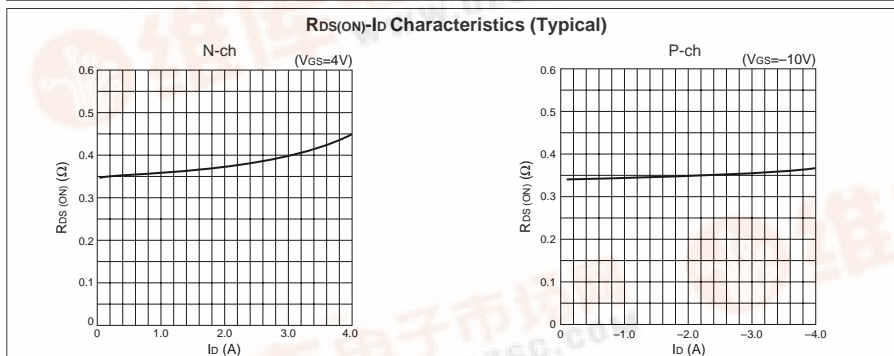
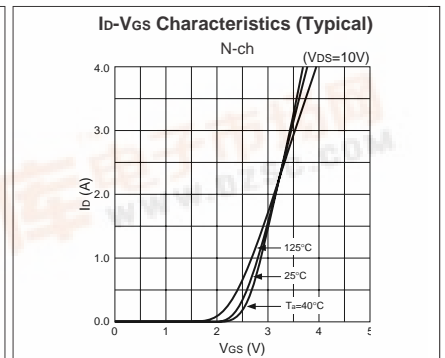
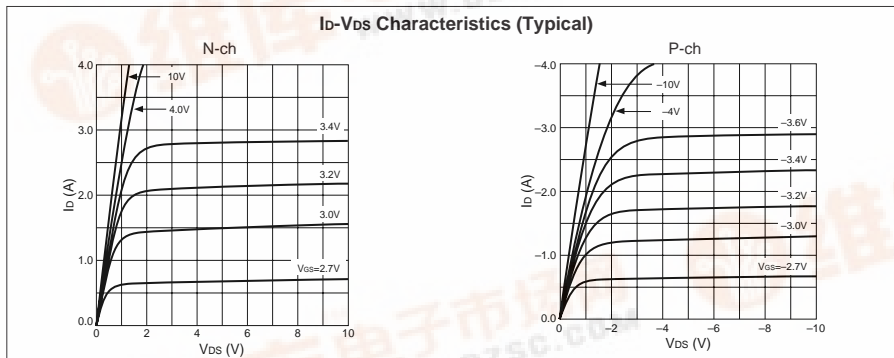
(Ta=25°C)

Symbol	Ratings		Unit
	N channel	P channel	
V <sub>BSS</sub>	60	-60	V
V <sub>GSS</sub>	±20	∓20	V
I <sub>D</sub>	4	-4	A
I <sub>D(pulse)</sub>	8 (PW≤1ms, Duty≤1%)	-8 (PW≤1ms, Duty≤1%)	A
P <sub>T</sub>	4 (Ta=25°C, with all circuits operating, without heatsink)		W
	28 (Tc=25°C, with all circuits operating, with infinite heatsink)		W
θ <sub>j-a</sub>	31.25 (Junction-Air, Ta=25°C, with all circuits operating)		°C/W
θ <sub>j-c</sub>	4.46 (Junction-Case, Tc=25°C, with all circuits operating)		°C/W
T <sub>ch</sub>	150		°C
T <sub>stg</sub>	-40 to +150		°C

## Equivalent circuit diagram



## Characteristic curves



# SMA5127

## 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	$I_D=-100\mu\text{A}, V_{GS}=0\text{V}$
$I_{GSS}$			$\pm 10$	$\mu\text{A}$	$V_{GS}=\pm 20\text{V}$			$\mp 10$	$\mu\text{A}$	$V_{GS}=\mp 20\text{V}$
$I_{DSS}$			100	$\mu\text{A}$	$V_{DS}=60\text{V}, V_{GS}=0\text{V}$			-100	$\mu\text{A}$	$V_{DS}=-60\text{V}, V_{GS}=0\text{V}$
$V_{TH}$	1.0		2.0	V	$V_{DS}=10\text{V}, I_D=250\mu\text{A}$	-1.0		-2.0	V	$V_{DS}=-10\text{V}, I_D=-250\mu\text{A}$
$Re(y_{fs})$		2.5		S	$V_{DS}=10\text{V}, I_D=2\text{A}$		3		S	$V_{DS}=-10\text{V}, I_D=-2\text{A}$
$R_{DS(ON)}$			0.55	$\Omega$	$V_{GS}=4\text{V}, I_D=2\text{A}$			0.55	$\Omega$	$V_{GS}=-10\text{V}, I_D=-2\text{A}$
$C_{iss}$		150		pF	$V_{DS}=10\text{V}, f=1.0\text{MHz},$ $V_{GS}=0\text{V}$		320		pF	$V_{DS}=-10\text{V}, f=1.0\text{MHz},$ $V_{GS}=0\text{V}$
$C_{oss}$		70		pF			130		pF	
$C_{rss}$		15		pF			40		pF	
$t_{d(on)}$		12		ns		$I_D=2\text{A}, V_{DD}=20\text{V},$ $R_L=10\Omega, V_{GS}=5\text{V}$ see Fig. 3 on page 16.		20		
$t_r$		40		ns			95		ns	
$t_{d(off)}$		40		ns			70		ns	
$t_f$		25		ns			60		ns	
$V_{SD}$		1.2		V	$I_{SD}=5\text{A}, V_{GS}=0\text{V}$			1.1		V
$t_{rr}$		75		ns	$I_{SD}=2\text{A}, V_{GS}=0\text{V}$ $di/dt=100\text{A}/\mu\text{s}$		75		ns	$I_{SD}=-2\text{A}, V_{GS}=0\text{V}$ $di/dt=100\text{A}/\mu\text{s}$

## Characteristic curves

