

SLA5022

查询SLA5022供应商

PNP Darlington + N-channel MOSFET 捷多邦, 专业PCB打样工厂, 24小时加急出货

3-phase motor drive

External dimensions  SLA

Absolute maximum ratings

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

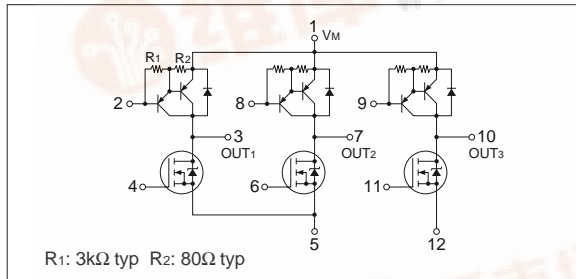
Symbol	Ratings	Unit
V_M	60	V
I_O	± 6 ($PW \leq 100\text{ms}$)	A
I_{OP}	± 10 ($PW \leq 1\text{ms}$)	A
V_{GS}	± 10	V
I_B	-0.5	A
P_T	5 ($T_a=25^\circ\text{C}$)	W
	35 ($T_c=25^\circ\text{C}$)	
θ_{j-a}	25	$^\circ\text{C/W}$
θ_{j-c}	3.57	$^\circ\text{C/W}$
V_{ISO}	1000 (Between fin and lead pin, AC)	V_{rms}
T_j	150	$^\circ\text{C}$
T_{stg}	-40 to +150	$^\circ\text{C}$

Electrical characteristics (Sink : N channel MOSFET)

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

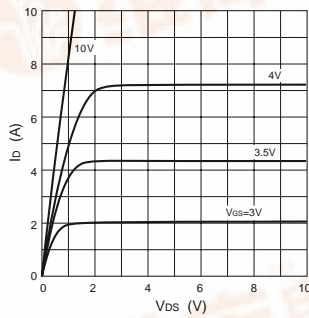
Symbol	Specification			Unit	Conditions
	min	typ	max		
$V_{(BR)DSS}$	60			V	$I_D=250\mu\text{A}$, $V_{GS}=0\text{V}$
I_{GSS}			± 500	nA	$V_{GS}=\pm 10\text{V}$
I_{DSS}			250	μA	$V_{DS}=60\text{V}$, $V_{GS}=0\text{V}$
V_{TH}	1.0		2.0	V	$V_{DS}=10\text{V}$, $I_D=250\mu\text{A}$
$Re(yfs)$	3.1	4.6		S	$V_{DS}=10\text{V}$, $I_D=4\text{A}$
$R_{DS(ON)}$		0.17	0.22	W	$V_{GS}=10\text{V}$, $I_D=4\text{A}$
		0.25	0.30		$V_{GS}=4\text{V}$, $I_D=4\text{A}$
C_{iss}		400		pF	$V_{DS}=25\text{V}$, $f=1.0\text{MHz}$,
C_{oss}		160		pF	$V_{GS}=0\text{V}$
t_{on}		80		ns	$I_D=4\text{A}$, $V_{DD}=30\text{V}$,
t_{off}		50		ns	$V_{GS}=5\text{V}$
V_{SD}		1.1	1.5	V	$I_{SD}=4\text{A}$, $V_{GS}=0\text{V}$
t_{rr}		150		ns	$I_F=\pm 100\text{mA}$

Equivalent circuit diagram

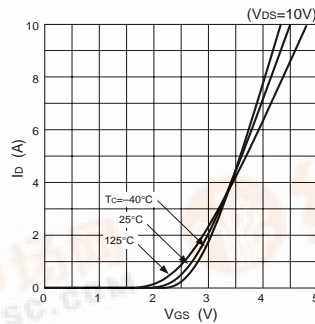


Characteristic curves (N-channel)

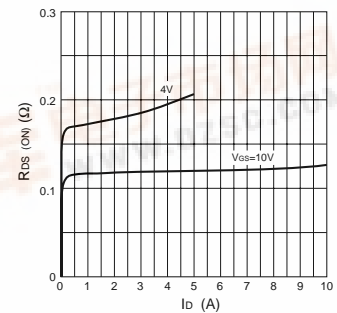
$V_{DS}-I_D$ Characteristics (Typical)



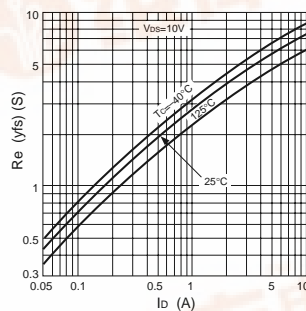
$V_{GS}-I_D$ Temperature Characteristics (Typical)



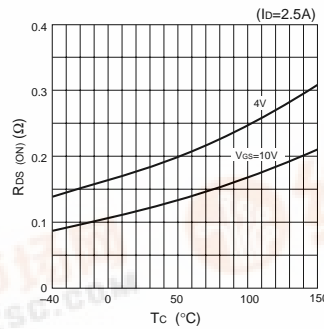
$I_{DS}-R_{DS(ON)}$ Characteristics (Typical)



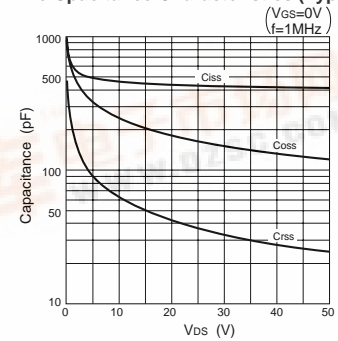
$I_D-Re(yfs)$ Temperature Characteristics (Typical)



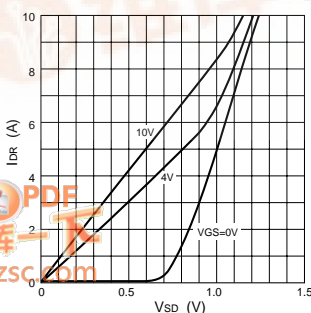
$T_C-R_{DS(ON)}$ Characteristics (Typical)



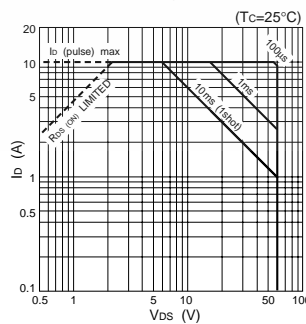
$V_{DS}-C$ Capacitance Characteristics (Typical)



$V_{SD}-I_{DR}$ Characteristics (Typical)



Safe Operating Area (SOA)

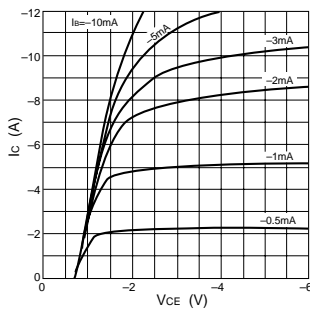


Electrical characteristics (Source: PNP transistor) ($T_a=25^\circ\text{C}$)

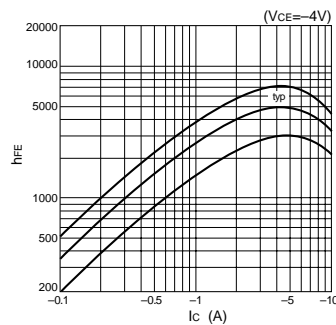
Symbol	Specification			Unit	Conditions
	min	typ	max		
I_{CBO}			-10	μA	$V_{CB}=-60\text{V}$
I_{EBO}	-1		-5	mA	$V_{EB}=-6\text{V}$
V_{CEO}	-60			V	$I_C=-25\text{mA}$
h_{FE}	2000	5000	12000		$V_{CE}=-4\text{V}$, $I_C=-4\text{A}$
$V_{CE(sat)}$			-1.5	V	$I_C=-4\text{A}$, $I_B=-10\text{mA}$
$V_{BE(sat)}$			-2.0	V	
V_{FEC}			2.0	V	$I_{FEC}=4\text{A}$
t_{rr}		1.0		μs	$I_F=\pm 0.5\text{A}$
t_{on}		1.0		μs	$V_{CC}=-25\text{V}$, $I_C=-4\text{A}$,
t_{stg}		1.4		μs	
t_f		0.6		μs	$I_{B1}=-I_{B2}=-10\text{mA}$
f_T		120		MHz	$V_{CE}=-12\text{V}$, $I_E=1\text{A}$
C_{ob}		150		pF	$V_{CB}=-10\text{V}$, $f=1\text{MHz}$

Characteristic curves (PNP)

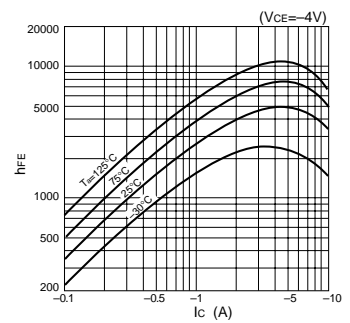
I_C - V_{CE} Characteristics (Typical)



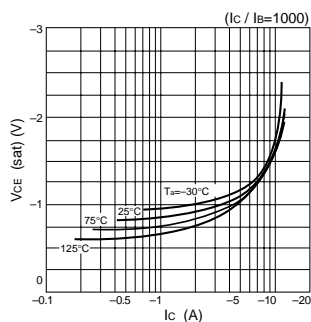
h_{FE} - I_C Characteristics (Typical)



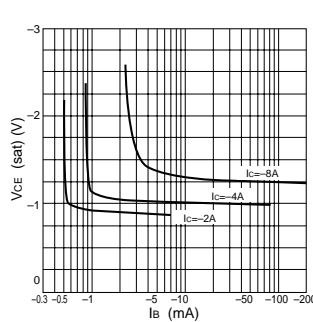
h_{FE} - I_C Temperature Characteristics (Typical)



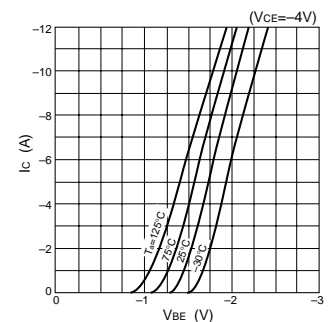
$V_{CE(sat)}$ - I_C Temperature Characteristics (Typical)



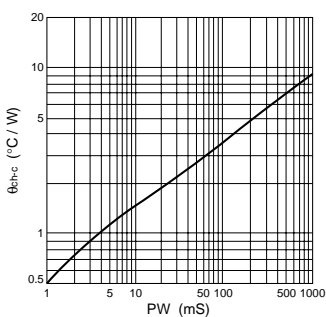
$V_{CE(sat)}$ - I_B Characteristics (Typical)



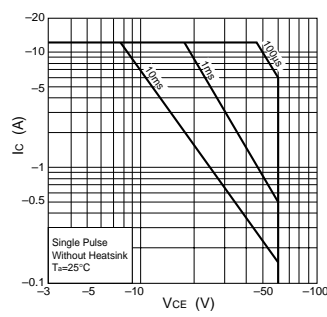
I_C - V_{BE} Temperature Characteristics (Typical)



θ_{j-a} -PW Characteristics



Safe Operating Area (SOA)



P_T - T_a Characteristics

