SLA5024

P-channel
General purpose

External dimensions Ⓐ···SLA

Absolute maximum ratings

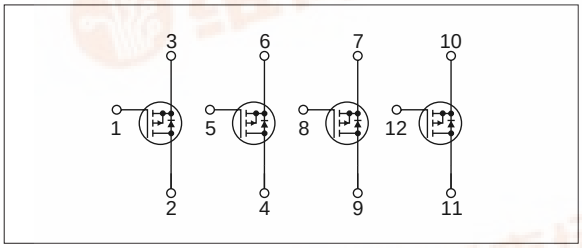
(Ta=25°C)

Symbol	Ratings	Unit
V_{DSS}	–60	V
V_{GSS}	∓20	V
I_D	∓4	A
$I_{D(pulse)}$	∓8 (PW≤1ms)	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)	Vrms
Tch	150	°C
Tstg	–40 to +150	°C

(Ta=25°C)

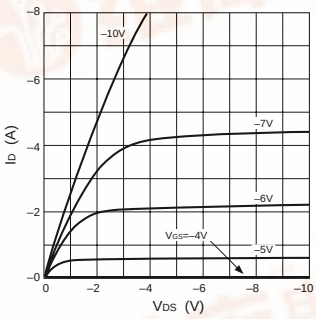
Symbol	Specification min	typ	max	Unit	Conditions
$V_{(BR)DSS}$	–60			V	I_D=–250μA, V_{GS}=0V
I_{GSS}			∓500	nA	V_{GS}=∓20V
I_{DSS}			–250	μA	V_{DS}=–60V, V_{GS}=0V
V_{TH}	–2.0		–4.0	V	V_{DS}=–10V, I_D=–250μA
$Re_{(yfs)}$	1.6	2.2		S	V_{DS}=–10V, I_D=–4A
$R_{DS(ON)}$		0.38	0.55	Ω	V_{GS}=–10V, I_D=–4A
Ciss		270		pF	V_{DS}=–25V, f=1.0MHz,
Coss		170		pF	V_{GS}=0V
t_{on}		60		ns	I_D=–4A, V_{DD}≒–30V, V_{GS}=–10V,
t_{off}		60		ns	see Fig. 4 on page 16.
V_{SD}		–4.4	–5.5	V	I_{SD}=–4A
t_{rr}		150		ns	I_{SD}=∓100mA

■Equivalent circuit diagram

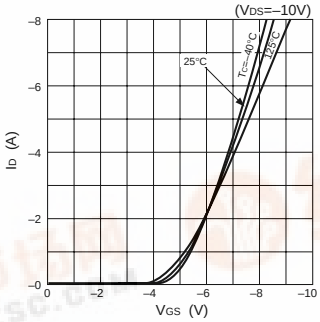


Characteristic curves

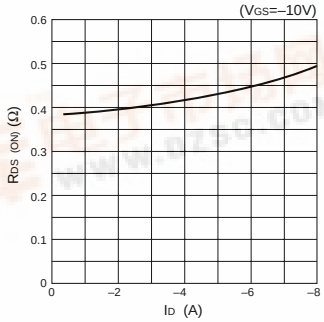
I_D-V_{DS} Characteristics (Typical)



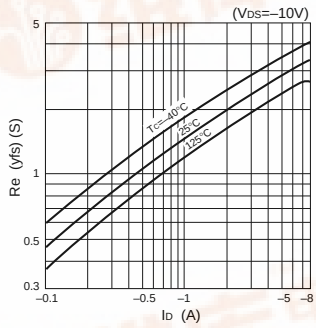
I_D-V_{GS} Characteristics (Typical)



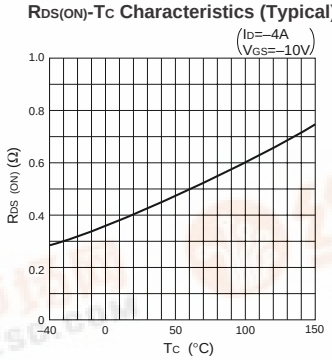
$R_{DS(ON)}$-I_D Characteristics (Typical)



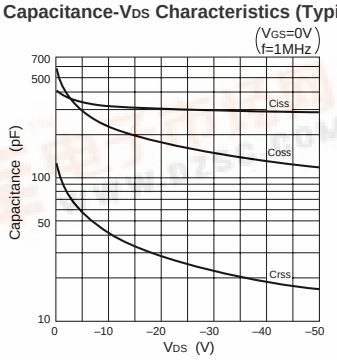
$Re_{(yfs)}$-I_D Characteristics (Typical)



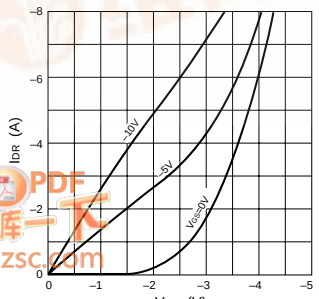
$R_{DS(ON)}$-T_C Characteristics (Typical)



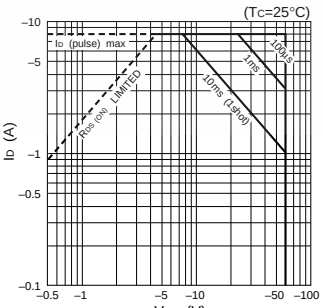
Capacitance-V_{DS} Characteristics (Typical)



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



Safe Operating Area (SOA)



P_T-T_a Characteristics