SDK02

N-channel

With built-in flywheel diode

External dimensions Ⓔ···SD

Absolute maximum ratings

(Ta=25°C)

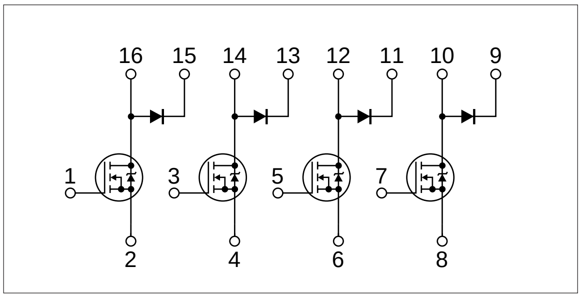
Symbol	Ratings	Unit
V_{DSS}	60	V
V_{GSS}	±10	V
I_D	±2	A
$I_{D(pulse)}$	±3 (PW≤100μs, Du≤1%)	A
I_F	1.5	A
I_{FSM}	2.5 (PW≤0.5ms, Du≤10%)	A
V_R	120	V
P_T	3 (Ta=25°C, 4-circuit operation)	W
Tch	150	°C
Tstg	–40 to +150	°C

Electrical characteristics

(Ta=25°C)

Symbol	Specification			Unit	Conditions
	min	typ	max		
$V_{(BR)DSS}$	60			V	I_D=250μA, V_{GS}=0V
I_{GSS}			±500	nA	V_{GS}=±10V
I_{DSS}			250	μA	V_{DS}=60V, V_{GS}=0V
V_{TH}	1.0		2.0	V	V_{DS}=10V, I_D=250μA
Re$_{(yfs)}$	1.2			S	V_{DS}=10V, I_D=1.0A
$R_{DS(ON)}$		0.19	0.24	Ω	V_{GS}=10V, I_D=1.0A
		0.25	0.30	Ω	V_{GS}=4V, I_D=1.0A
Ciss		400		pF	V_{DS}=25V, f=1.0MHz, V_{GS}=0V
Coss		160		pF	
Crss		35		pF	
V_{SD}		1.0	1.5	V	I_{SD}=2A, V_{GS}=0V
trr		150		ns	I_{SD}=±100mA

■Equivalent circuit diagram



●Diode for flyback voltage absorption

Symbol	Specification			Unit	Conditions
	min	typ	max		
V_R	120			V	I_R=10μA
V_F			1.6	V	I_F=1A
I_R			100	Ω	V_R=120V
trr		100		ns	I_F=±100mA

Characteristic curves