

1. TYPE 2SK3050
2. STRUCTURE SILICON N-CHANNEL MOS FIELD EFFECT TRANSISTOR
3. APPLICATIONS SWITCHING

4. ABSOLUTE MAXIMUM RATINGS [Ta=25°C]

DRAIN-SOURCE VOLTAGE	VDSS	· · ·	600V
GATE-SOURCE VOLTAGE	IGSS	· · ·	± 30V
DRAIN CURRENT CONTINUOUS	ID	· · ·	2A
PULSED	IDP	· · ·	6A
		PW ≤ 10μ s	DUTY CYCLE ≤ 1%
SOURCE CURRENT CONTINUOUS	IS	· · ·	2A
PULSED	SP	· · ·	6A
		PW ≤ 10μ s	DUTY CYCLE ≤ 1%
TOTAL POWER DISSIPATION (Tc=25°C)	PD	· · ·	20W
CANNEL TEMPERATURE	Tch	· · ·	150°C
RANGE OF STRAGE TEMPERATURE	Tstg	· · ·	-55 ~ 150°C

5. THERMAL RESISTANCE

CHANNEL TO CASE	Rth(ch-c)	· · ·	6.25°C/W
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DESIGN

CHECK

APPROVAL

DATE:14.JAN.2000

SPECIFICATION No. : TSQ03019-108-E00

REV.A

ROHM CO., LTD.

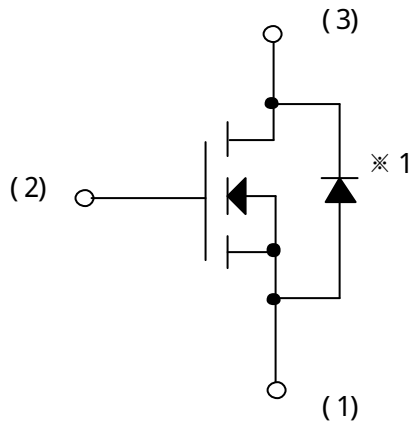
6. ELECTRICAL CHARACTERISTICS [Ta=25°C]

PARAMETER	ITEM	CONDITION	MIN.	TYP.	MAX.
GATE-SOURCE LEAKAGE	IGSS	VGS= ± 30V / VDS=0V	-	-	± 100nA
DRAIN-SOURCE BREAKDOWN VOLTAGE	V(BR)DSS	ID=1mA / VGS=0V	600V	-	-
ZERO GATE VOLTAGE DRAIN CURRENT	IDSS	VDS=600 / VGS=0V	-	-	100μ A
GATE THRESHOLD VOLTAGE	VGS(th)	VDS=10V / ID=1mA	2.0V	-	4.0V
STATIC DRAIN-SOURCE ON-STATE RESISTANCE	RDS(on)	ID=1A / VGS=10V	-	4.4Ω	5.5Ω
FORWARD TRANSFER ADMITTANCE	Yfs * PULSE	VDS=10V / ID=1A	0.5S	1.0S	-
INPUT CAPACITANCE	Ciss	VDS=10V / VGS=0V f=1MHz	-	280pF	-
OUTPUT CAPACITANCE	Coss		-	48pF	-
REVERSE TRANSFER CAPACITANCE	Crss		-	16pF	-
TURN-ON DELAY TIME	td(on) * PULSE	ID=1A / VDD ≐ 300V VGS=10V / RL=300Ω RGS=10Ω	-	12ns	-
RISE TIME	tr * PULSE		-	17ns	-
TURN-OFF DELAY TIME	td(off) * PULSE		-	29ns	-
FALL TIME	tf * PULSE		-	105ns	-
TOTAL GATE CHARGE	Qg * PULSE	VDD ≐ 300V / VGS=10V ID=2A	-	12.8nC	25.6nC
GATE-SOURCE CHARGE	Qgs * PULSE		-	3.3nC	-
GATE-DRAIN CHARGE	Qgd * PULSE		-	5.5nC	-

7. BODY DIODE CHARACTERISTICS(SOURCE- DRAIN CHARACTERISTICS) [Ta=25°C]

PARAMETER	ITEM	CONDITION	MIN.	TYP.	MAX.
FORWARD VOLTAGE	VSD * PULSE	Is=2A / VGS=0V			2.0 V
REVERSE RECOVERY TIME	Trr * PULSE	IDR=2 / VGS=0V		460nS	
REVERSE RECOVERY CHARGE	Qrr * PULSE		di/dt=100A/uS		2.0uC

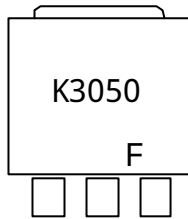
8 . INNER CIRCUIT



- (1) SOURCE
- (2) GATE
- (3) DRAIN

※ 1 BODY DIODE

9. MARKING



" K3050 " MEANS 2SK3050 .

" F " MEANS THE PRODUCTION MONTH PLEASE SEE TABLE 1 FOR DETAILS.

Table 1

Production month	1	2	3	4	5	6	7	8	9	10	11	12	
Marking	Even year A.D.	A	B	C	D	E	F	G	H	J	K	L	M
	Odd year A.D.	N	P	Q	R	S	T	U	V	W	X	Y	Z