

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

4. ABSOLUTE MAXIMUM RATINGS [ $T_a=25$  ]

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

## 5. THERMAL RESISTANCE

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

CHECK

APPROVAL

DATE:14.JAN.2000

SPECIFICATION No. : TSQ03019-108-E00

REV.A

**ROHM CO., LTD.**

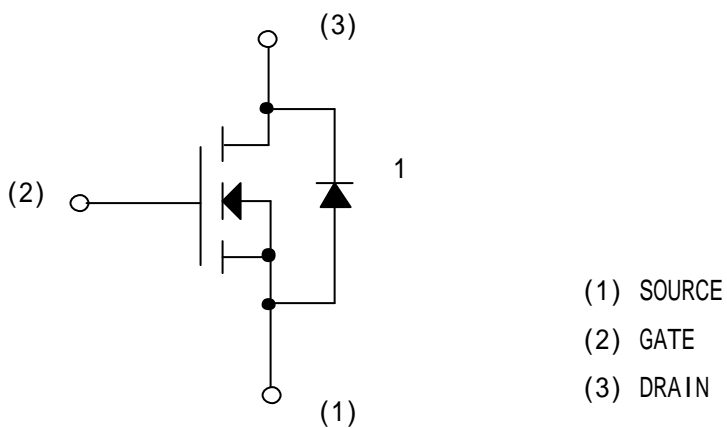
**6. ELECTRICAL CHARACTERISTICS [Ta=25 ]**

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	-	-	100 μ 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	-	4.4	5.5
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=300 RGS=10	-	12ns	-
RISE TIME	tr * PULSE		-	17ns	-
TURN-OFF DELAY TIME	td(off) * PULSE		-	29ns	-
FALL TIME	tf * PULSE		-	105ns	-
TOTAL GATE CHARGE	Qg * PULSE		-	12.8nC	25.6nC
GATE-SOURCE CHARGE	Qgs * PULSE	VDD 300V / VGS=10V	-	3.3nC	-
GATE-DRAIN CHARGE	Qgd * PULSE	ID=2A	-	5.5nC	-

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

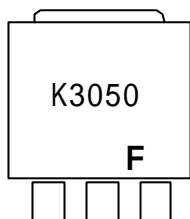
PARAMETER	ITEM	CONDITION	MIN.	TYP.	MAX.
FORWARD VOLTAGE	VSD * PULSE	Is=2A / VGS=0V			2.0 V
REVERSE RECOVERY TIME	Trr * PULSE	IDR=2 / VGS=0V		460nS	
REVERSE RECOVERY CHARGE	Qrr * PULSE	di/dt=100A/uS		2.0uC	

8 . INNER CIRCUIT



1 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

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