

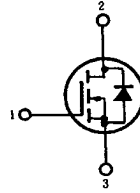
查询"2SK440"供应商 **2SK440**

SILICON N-CHANNEL MOS FET

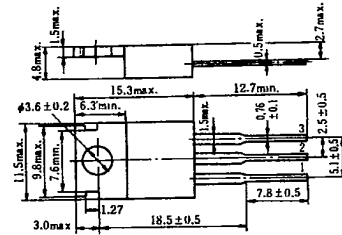
**HIGH SPEED POWER SWITCHING
HIGH FREQUENCY POWER AMPLIFIER**

FEATURES

- Low On-Resistance.
- High Speed Switching.
- High Cutoff Frequency.
- No Secondary Breakdown.
- Suitable for Switching Regulator and DC-DC Converter.



1. Gate
2. Drain (Flange)
3. Source
(Dimensions in mm)



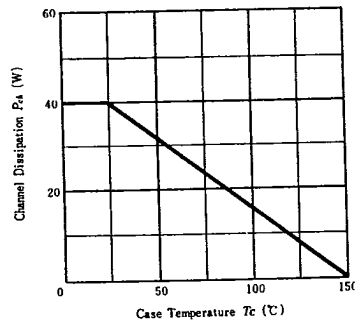
(JEDEC TO-220AB)

ABSOLUTE MAXIMUM RATINGS (T_a=25 °C)

Item	Symbol	Rating	Unit
Drain-Source Voltage	V _{DS}	200	V
Gate-Source Voltage	V _{GS}	±20	V
Drain Current	I _D	6	A
Drain Peak Current	I _{D(peak)}	12	A
Body-Drain Diode Reverse Drain Current	I _{DR}	6	A
Channel Dissipation	P _{ch} *	40	W
Channel Temperature	T _{ch}	150	°C
Storage Temperature	T _{stg}	-55 ~ +150	°C

*Value at T_i=25 °C

POWER VS. TEMPERATURE DERATING



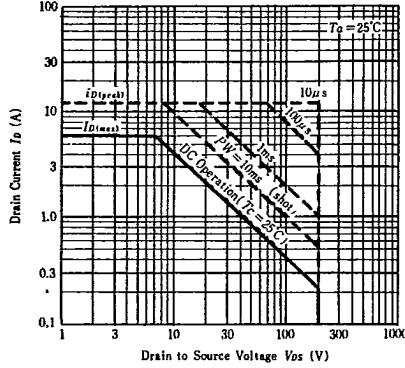
ELECTRICAL CHARACTERISTICS (T_a=25 °C)

Item	Symbol	Test Condition	min.	typ.	max.	Unit
Drain-Source Breakdown Voltage	V _{(BR)DSS}	I _D =10mA, V _{GS} =0	200	—	—	V
Gate-Source Leak Current	I _{GSS}	V _{GS} =±20V, V _{DS} =0	—	—	±1	μA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =160V, V _{GS} =0	—	—	1	mA
Gate-Source Cutoff Voltage	V _{GS(off)}	I _D =1mA, V _{DS} =10V	2.0	—	5.0	V
Static Drain-Source On State Resistance	R _{DS(on)}	I _D =3A, V _{GS} =15V*	—	0.4	0.5	Ω
Drain-Source Saturation Voltage	V _{DS(on)}	I _D =3A, V _{GS} =15V*	—	1.2	1.5	V
Forward Transfer Admittance	y _f	I _D =3A, V _{DS} =10V*	1.0	1.8	—	S
Input Capacitance	C _{iss}	V _{DS} =10V, V _{GS} =0, f=1MHz	—	750	—	pF
Output Capacitance	C _{oss}		—	300	—	pF
Reverse Transfer Capacitance	C _{rss}		—	60	—	pF
Turn-on Delay Time	t _(don)	I _D =2A, V _{GS} =15V, R _L =15Ω	—	15	—	ns
Rise Time	t _r		—	25	—	ns
Turn-off Delay Time	t _(doff)		—	70	—	ns
Fall Time	t _f		—	40	—	ns
Body-Drain Diode Forward Voltage	V _{DF}	I _F =3A, V _{GS} =0	—	0.9	—	V
Body-Drain Diode Reverse Recovery Time	t _{rr}	I _F =3A, V _{GS} =0 di _F /dt=50A/μs	—	300	—	ns

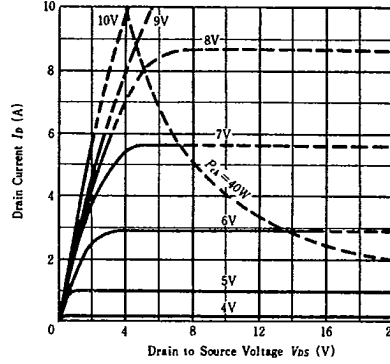
*Pulse Test

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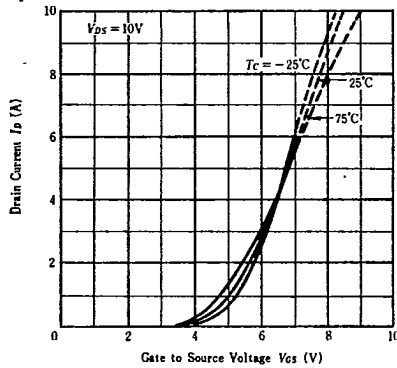
MAXIMUM SAFE OPERATION AREA



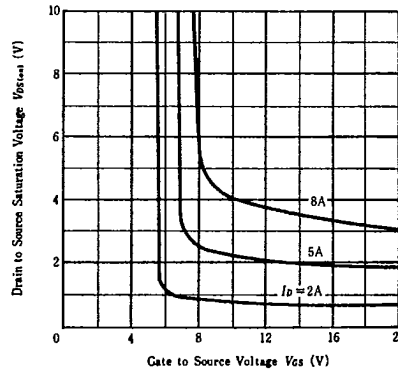
TYPICAL OUTPUT CHARACTERISTICS



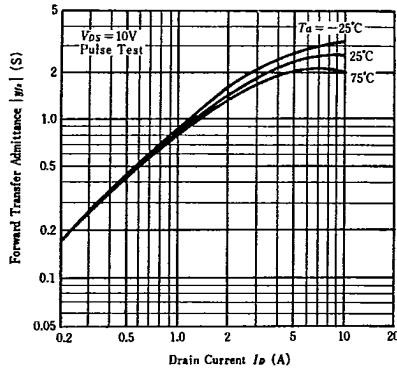
TYPICAL TRANSFER CHARACTERISTICS



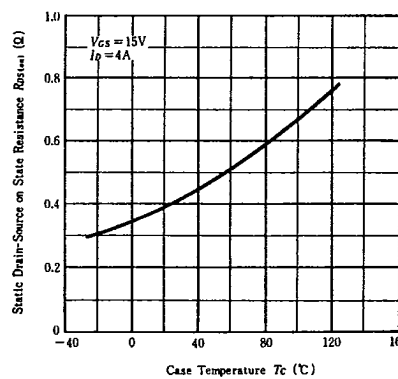
DRAIN-SOURCE SATURATION VOLTAGE VS. GATE-SOURCE VOLTAGE



FORWARD TRANSFER ADMITTANCE VS. DRAIN CURRENT



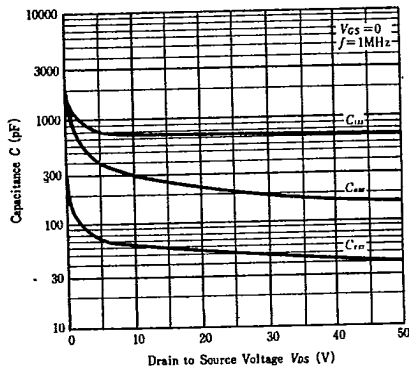
STATIC DRAIN-SOURCE ON STATE RESISTANCE VS. TEMPERATURE



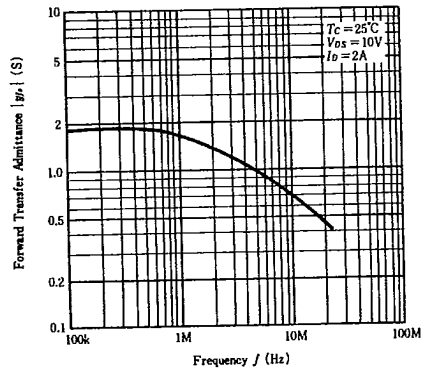
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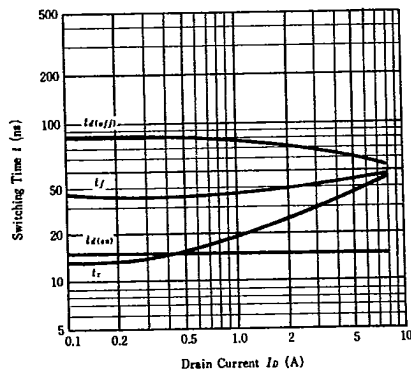
TYPICAL CAPACITANCE VS. DRAIN-SOURCE VOLTAGE



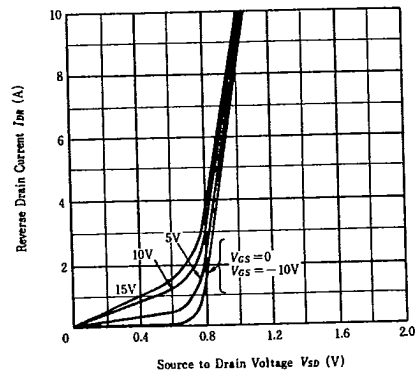
FORWARD TRANSFER ADMITTANCE VS. FREQUENCY



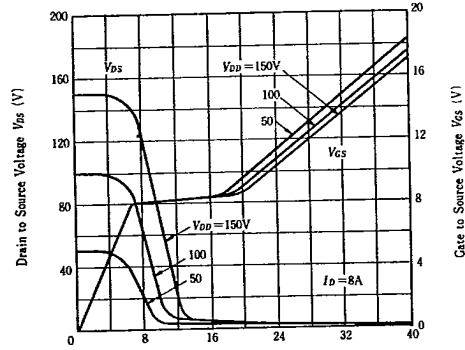
SWITCHING CHARACTERISTICS



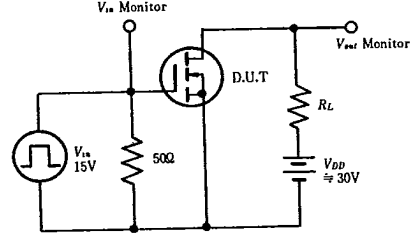
MAXIMUM BODY-DRAIN DIODE FORWARD VOLTAGE



DYNAMIC INPUT CHARACTERISTICS



SWITCHING TIME TEST CIRCUIT



WAVEFORMS

