

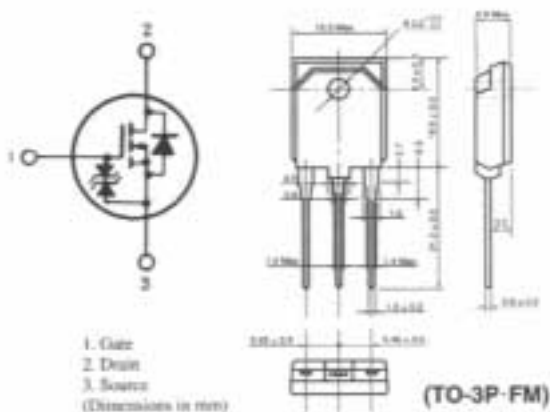
2SK1206, 2SK1225

SILICON N-CHANNEL MOS FET

高速度電力スイッチング

■特長

- オン抵抗が低い。
- スイッチングスピードが速い。
- 駆動電力が小さい。
- 2次降伏がない。
- スイッチングレギュレータ、DC-DCコンバータ、モータドライバなどに最適。



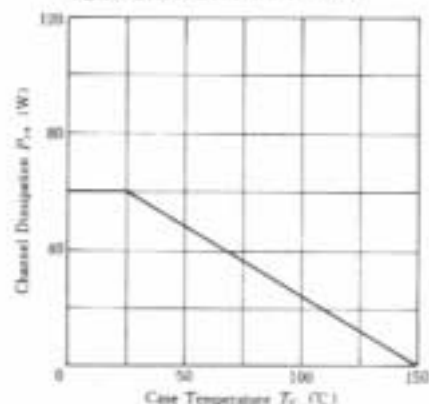
■ ABSOLUTE MAXIMUM RATINGS ($T_a=25^\circ\text{C}$)

Item	Symbol	2SK1225	2SK1206	Unit
Drain-Source Voltage	V_{DS}	450	500	V
Gate-Source Voltage	V_{GS}	±20		V
Drain Current	I_D	12		A
Drain Peak Current	$I_{D(peak)}$ *	48		A
Body-Drain Diode Reverse Drain Current	I_{DR}	12		A
Channel Dissipation	P_{ch} *	60		W
Channel Temperature	T_{ch}	150		$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 ~ +150		$^\circ\text{C}$

*PWS10 μ s, duty cycles 1%

**Value at $T_c=25^\circ\text{C}$

POWER VS. TEMPERATURE DERATING



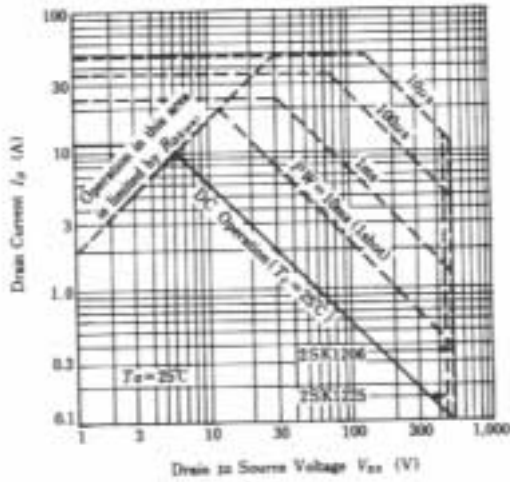
■ ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

Item	Symbol	Test Condition	min.	typ.	max.	Unit
Drain-Source Breakdown Voltage	2SK1225	$I_D=10\text{mA}, V_{GS}=0$	450	—	—	V
	2SK1206		500	—	—	
Gate-Source Breakdown Voltage	$V_{GS(BR)}$	$I_G=\pm 100\mu\text{A}, V_{DS}=0$	±20	—	—	V
Gate-Source Leak Current	I_{GS}	$V_{GS}=\pm 16\text{V}, V_{DS}=0$	—	—	±10	μA
Zero Gate Voltage Drain Current	2SK1225	$V_{DS}=360\text{V}, V_{GS}=0$	—	—	250	μA
	2SK1206		$V_{DS}=400\text{V}, V_{GS}=0$	—	—	
Gate-Source Cutoff Voltage	$V_{GS(off)}$	$I_D=1\text{mA}, V_{DS}=10\text{V}$	2.0	—	4.0	V
Static Drain-Source On State Resistance	2SK1225	$I_D=6\text{A}, V_{GS}=10\text{V}^*$	—	0.4	0.55	Ω
	2SK1206		—	0.45	0.60	
Forward Transfer Admittance	$ y_{fs} $	$I_D=6\text{A}, V_{GS}=10\text{V}^*$	6	10	—	S
Input Capacitance	C_{in}	$V_{DS}=10\text{V}, V_{GS}=0, f=1\text{MHz}$	—	2050	—	pF
Output Capacitance	C_{out}		—	720	—	pF
Reverse Transfer Capacitance	C_{rs}		—	80	—	pF
Turn-on Delay Time	t_{on}		—	25	—	ns
Rise Time	t_r	$I_D=6\text{A}, V_{GS}=10\text{V}, R_L=5\Omega$	—	85	—	ns
Turn-off Delay Time	t_{off}		—	145	—	ns
Fall Time	t_f		—	85	—	ns
Body-Drain Diode Forward Voltage	V_{SD}		$I_S=12\text{A}, V_{GS}=0$	—	1.0	—
Body-Drain Diode Reverse Recovery Time	t_{rr}	$I_S=12\text{A}, V_{GS}=0, di/dt=100\text{A}/\mu\text{s}$	—	450	—	ns

*Gate Test

■電気的特性曲線は、2SK556, 2SK557参照。

MAXIMUM SAFE OPERATION AREA



NORMALIZED TRANSIENT THERMAL IMPEDANCE VS. PULSE WIDTH

