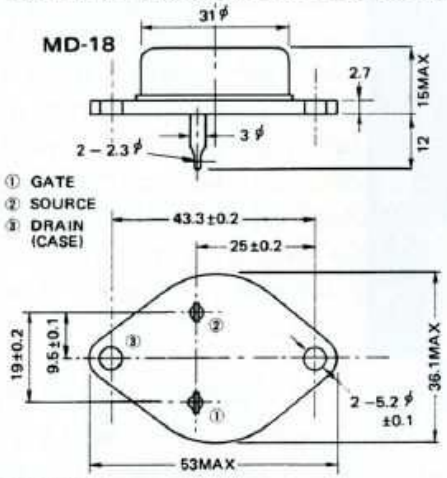
YAMAHA VERTICAL FET 2SK77/2SK75 CHARACTERISTICS

SILICON N CHANNEL VERTICAL JUNCTION

FET FEATURES

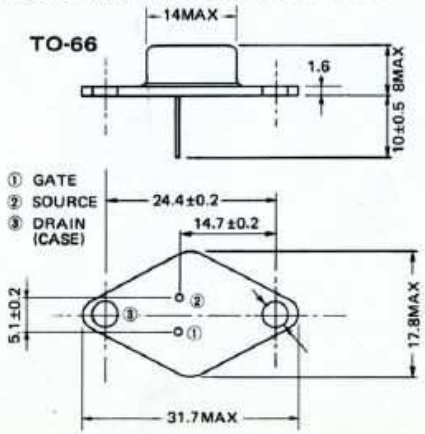
●2SK-77

High Voltage . . . . . >200V
High Transconductance. . . . . 1500m℧
Triode-like Characteristics
Low Output Impedance 5Ω
High Power Capability 200WΩ



●2SK-75

High Voltage . . . . . >200V
High Transconductance . . . . . 30m℧
Triode-like Characteristics
Low Output Impedance. 1.3KΩ



MAXIMUM RATING (Ta = 25°C unless otherwise noted)

		2SK77		2SK75	
RATING	SYMBOL	VALUE	UNIT	VALUE	UNIT
Drain−Gate Voltage	V_{DGO}	200	V	200	V
Gate−Source Voltage	V_{GSO}	−40	V	−30	V
Drain Current	I_D	20	A	500	mA
Gate Current	I_G	21	A	10	mA
Dissipation Power (Tc = 25°C)	P_D	200	W	20	W
Junction Temperature	T_j	150	°C	150	°C
Storage Temperature Range	T_{stg}	−55 ~ 150	°C	−55 ~ 150	°C

ELECTRICAL CHARACTERISTICS (Ta = 25° C unless otherwise noted)

		2SK77					2SK75				
Characteristic	Symbol	Condition	min	typ	max	unit	Condition	min	typ	max	unit
Drain−Gate Breakdown Voltage	BV_{DGO}	I_G=−1mA, I_S=0	200			V	I_G=−100μA, I_S=0	200			V
Gate−Source Breakdown Voltage	BV_{GSO}	I_G=−0.2mA, I_D=0	−40			V	I_G=−100μA, I_D=0	−35			V
Drain−Gate Leakage Current	I_{DGO}	V_{DG}=100V, I_S=0		1	100	μA	V_{DG}=100V, I_S=0			1	μA
Gate Leakage Current	I_{GSS}	V_{GS}=−30V, V_{DS}=0		−1	−100	μA	V_{GS}=−30V, V_{DS}=0			−1	μA
Drain Current	I_{DSS}	V_{DS}=10V, V_{GS}=0		8		A	V_{DS}=5V, V_{GS}=0	10	50		mA
Gate−Source Cutoff Voltage	$V_{GS(off)}$	V_{DS}=100V, I_D=1mA			−25	V	V_{DS}=100V, I_D=100μA		−6	−16	V
Forward Transconductance	y_{fs}	V_{DS}=30V, I_D=2A, f=1kHz		1.5		℧	V_{DS}=80V, I_D=10mA, f=1kHz		30		m℧
Voltage Amplification factor	μ			7.5					40		
Drain Resistance	r_D			5		Ω			1.3		kΩ
Input Capacitance	Ciss	V_{DS}=0, V_{GS}=−10V, f=1MHz		3000		pF	V_{DS}=0, V_{GS}=−10V, f=1MHz		180		pF
Feedback Capacitance	Cr	V_{DG}=50V, I_S=0 f=1MHz		300		pF	V_{DG}=50V, I_S=0, f=1MHz		18		pF