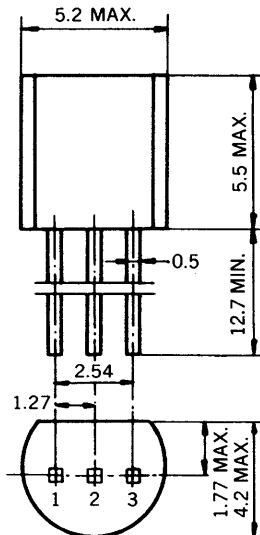
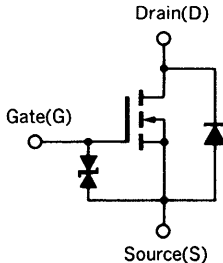


**N-CHANNEL MOS FET  
FOR SWITCHING**

**PACKAGE DIMENSIONS (Unit : mm)**



- 1. Gate
- 2. Drain
- 3. Source



(Diode in the figure is the parasitic diode.)

The 2SK1484, N-channel vertical type MOS FET, is a switching device which can be driven directly by the output of ICs having a 5 V power source.

As the MOS FET has low on-state resistance and excellent switching characteristics, it is suitable for driving actuators such as motors, relays, and solenoids.

**FEATURES**

- Directly driven by ICs having a 5 V power source.
- Has low on-state resistance  
 $R_{DS(on)1} = 1.2 \Omega \text{ MAX. @ } V_{GS} = 4.0 \text{ V, } I_D = 0.5 \text{ A}$   
 $R_{DS(on)2} = 0.8 \Omega \text{ MAX. @ } V_{GS} = 10 \text{ V, } I_D = 0.5 \text{ A}$
- Can be used complementary with the 2SJ198

**QUALITY GRADE**

Standard

Please refer to "Quality grade on NEC Semiconductor Devices" (Document number IEI-1209) published by NEC Corporation to know the specification of quality grade on the devices and its recommended applications.

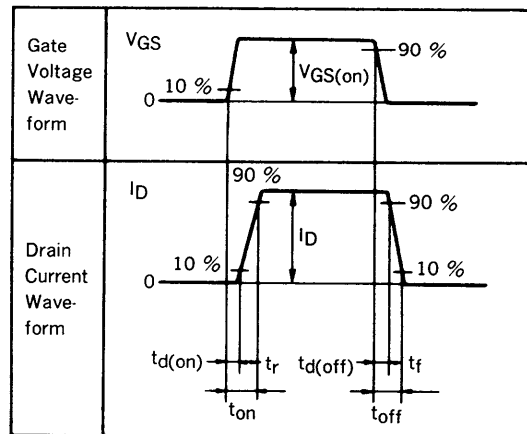
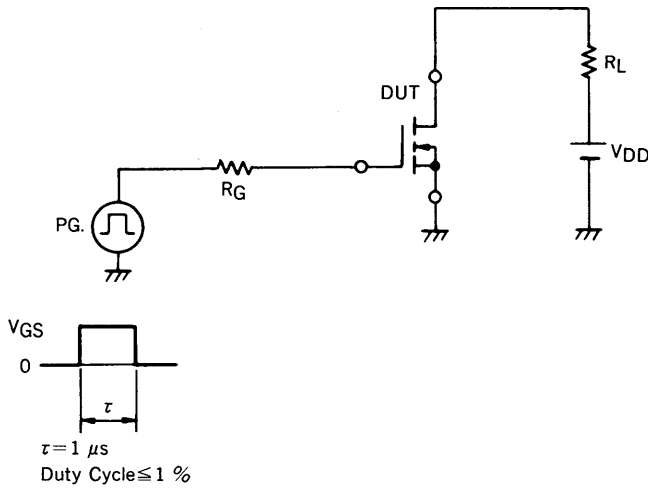
**ABSOLUTE MAXIMUM RATINGS ( $T_a = 25^\circ\text{C}$ )**

PARAMETER	SYMBOL	RATINGS	UNIT	TEST CONDITIONS
Drain to Source Voltage	$V_{DSS}$	100	V	$V_{GS} = 0$
Gate to Source Voltage	$V_{GSS}$	$\pm 20$	V	$V_{DS} = 0$
Drain Current	$I_D(\text{DC})$	$\pm 500$	mA	
Drain Current	$I_D(\text{pulse})$	$\pm 1.0$	A	$PW \leq 10 \text{ ms, Duty Cycle} \leq 50 \%$
Total Power Dissipation	$P_T$	750	mW	
Channel Temperature	$T_{ch}$	150	$^\circ\text{C}$	
Storage Temperature	$T_{stg}$	$-55 \text{ to } +150$	$^\circ\text{C}$	

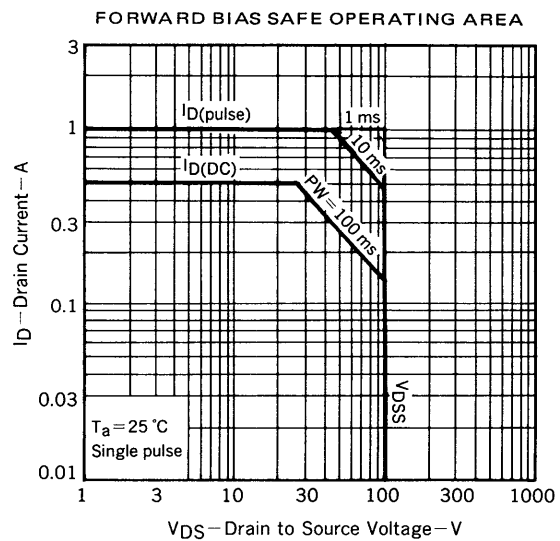
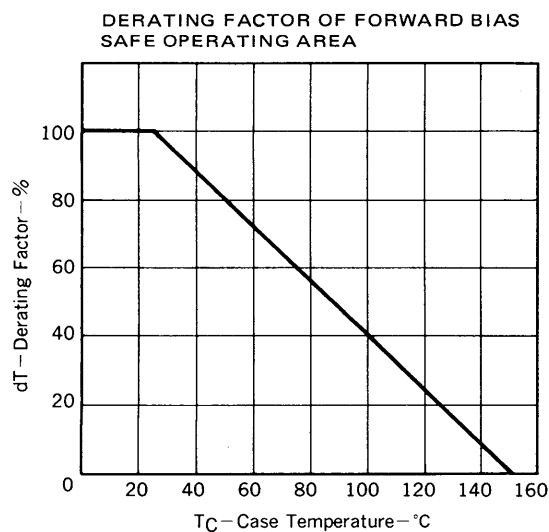
ELECTRICAL CHARACTERISTICS (T<sub>a</sub> = 25 °C)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Drain Cut-off Current	I <sub>DSS</sub>			10	μA	V <sub>DS</sub> = 100 V, V <sub>GS</sub> = 0
Gate Leakage Current	I <sub>GSS</sub>			±10	μA	V <sub>GS</sub> = ±20 V, V <sub>DS</sub> = 0
Gate Cut-off Voltage	V <sub>GS(off)</sub>	0.8	1.2	2.0	V	V <sub>DS</sub> = 10 V, I <sub>D</sub> = 1 mA
Forward Transfer Admittance	y <sub>fs</sub>	0.4			S	V <sub>DS</sub> = 10 V, I <sub>D</sub> = 0.5 A
Drain to Source On-State Resistance	R <sub>DS(on)1</sub>		0.6	1.2	Ω	V <sub>GS</sub> = 4.0 V, I <sub>D</sub> = 0.5 A
Drain to Source On-State Resistance	R <sub>DS(on)2</sub>		0.5	0.8	Ω	V <sub>GS</sub> = 10 V, I <sub>D</sub> = 0.5 A
Input Capacitance	C <sub>iss</sub>		230		pF	V <sub>DS</sub> = 10 V, V <sub>GS</sub> = 0, f = 1 MHz
Output Capacitance	C <sub>oss</sub>		80		pF	
Feedback Capacitance	C <sub>rss</sub>		12		pF	
Turn-On Delay Time	t <sub>d(on)</sub>		14		ns	V <sub>GS(on)</sub> = 10 V, R <sub>G</sub> = 10 Ω V <sub>DD</sub> = 25 V, I <sub>D</sub> = 0.5 A R <sub>L</sub> = 50 Ω
Rise Time	t <sub>r</sub>		14		ns	
Turn-Off Delay Time	t <sub>d(off)</sub>		370		ns	
Fall Time	t <sub>f</sub>		65		ns	

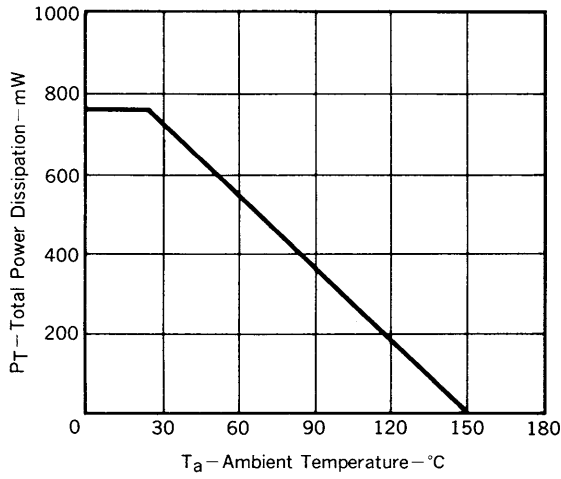
SWITCHING TIME MEASUREMENT CIRCUIT AND CONDITIONS



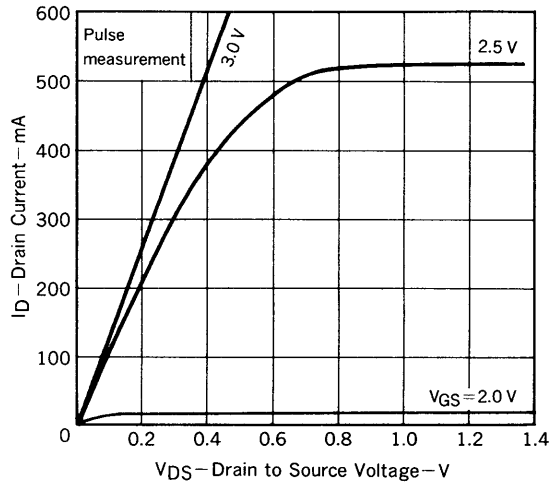
TYPICAL CHARACTERISTICS (T<sub>a</sub> = 25 °C)



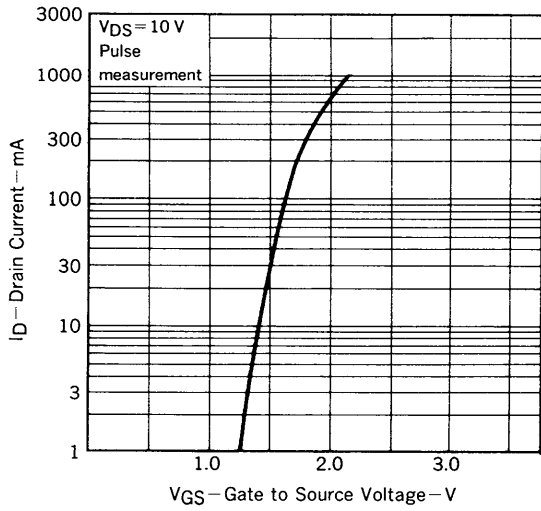
TOTAL POWER DISSIPATION vs. AMBIENT TEMPERATURE



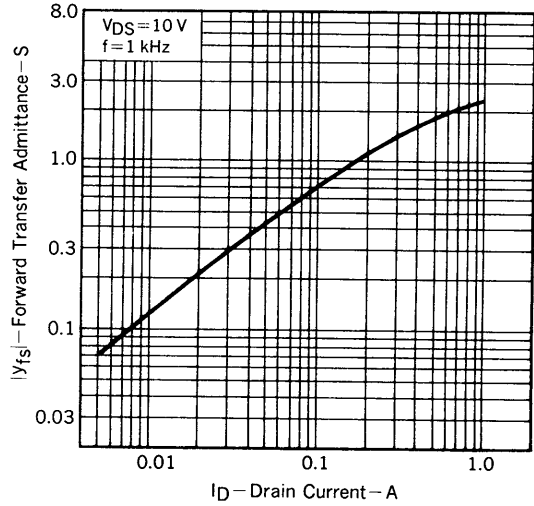
DRAIN CURRENT vs. DRAIN TO SOURCE VOLTAGE



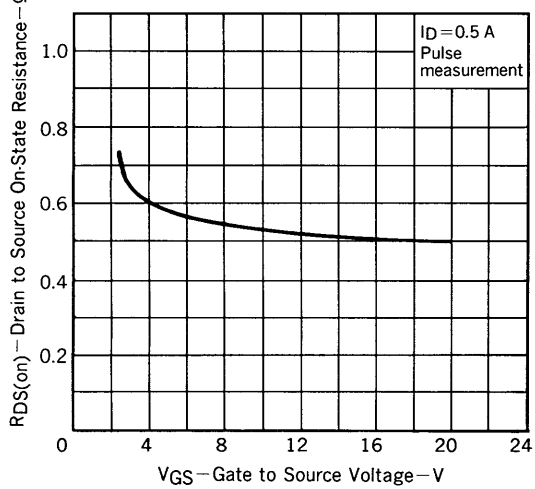
TRANSFER CHARACTERISTICS



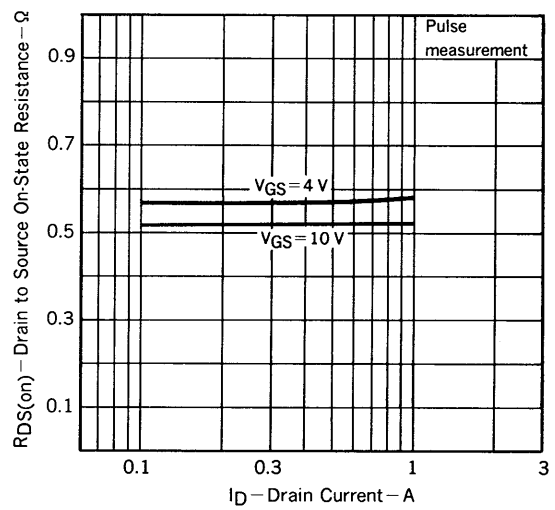
FORWARD TRANSFER ADMITTANCE vs. DRAIN CURRENT



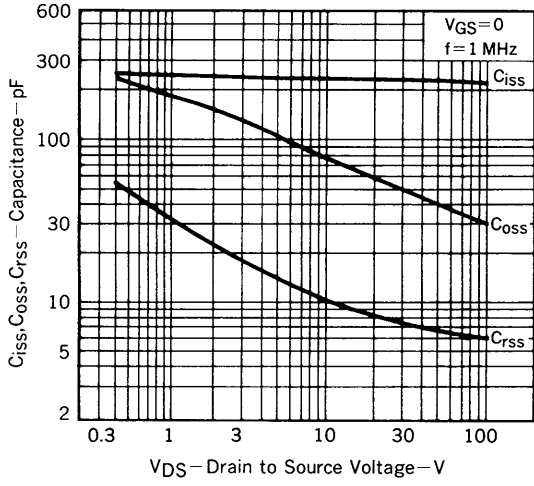
DRAIN TO SOURCE ON-STATE RESISTANCE vs. GATE TO SOURCE VOLTAGE



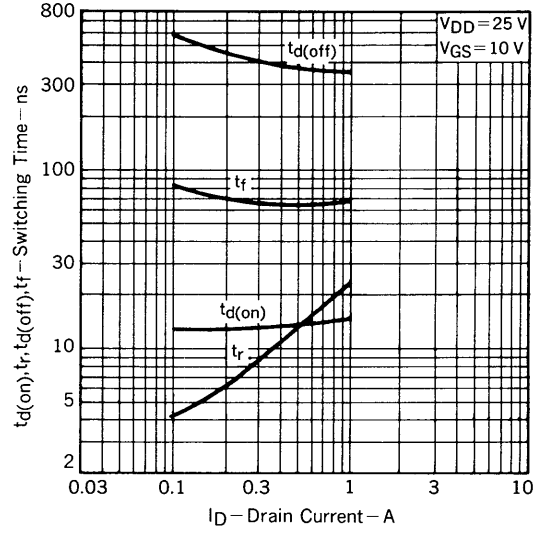
DRAIN TO SOURCE ON-STATE RESISTANCE vs. DRAIN CURRENT



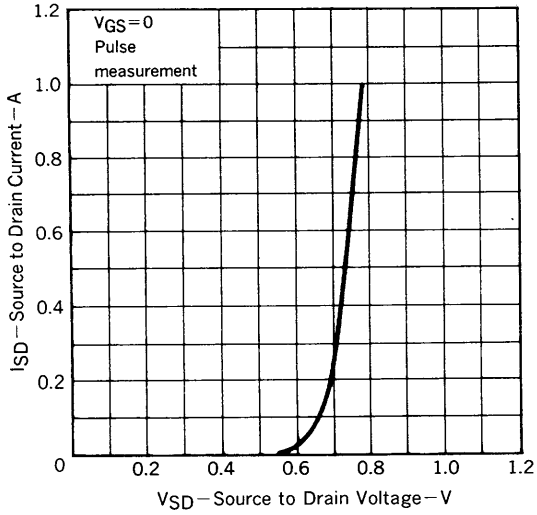
CAPACITANCE vs. DRAIN TO SOURCE VOLTAGE



SWITCHING CHARACTERISTICS



SOURCE TO DRAIN DIODE FORWARD VOLTAGE



**RECOMMENDED SOLDERING CONDITIONS**

Solder this product under the following recommended conditions.

For soldering methods or soldering conditions other than those recommended in the table, please consult our NEC salespeople.

**Insert type**

Soldering method	Soldering conditions	Recommended condition code
Wave soldering	Solder bath temperature: 260 °C max. Soldering time: 10 sec max.	

[MEMO]

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Application examples recommended by NEC Corporation

Standard: Data processing and office equipment, Communication equipment (terminal, mobile), Test and Measurement equipment, Audio and Video equipment, Other consumer products, etc.

Special: Automotive and Transportation equipment, Communication equipment (trunk line), Train and Traffic control devices, industrial robots, Burning control systems, antidisaster systems, anticrime systems etc.



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