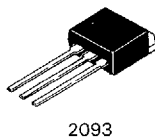


2SK1691



2093



2090

AP (Advanced Performance) Series

$V_{DS} = 450V$

N Channel Power MOSFET

©4224

Features

- Low ON resistance.
- Very high-speed switching.

Absolute Maximum Ratings at $T_a = 25^\circ C$

		unit
Drain to Source Voltage	V_{DS}	450 V
Gate to Source Voltage	V_{GS}	± 30 V
Drain Current(DC)	I_D	5 A
Drain Current(Pulse)	I_{DP}	20 A
Allowable Power Dissipation	P_D	1.65 W
	$T_c = 25^\circ C$	60 W
Channel Temperature	T_{ch}	150 $^\circ C$
Storage Temperature	T_{stg}	-55 to +150 $^\circ C$

Electrical Characteristics at $T_a = 25^\circ C$

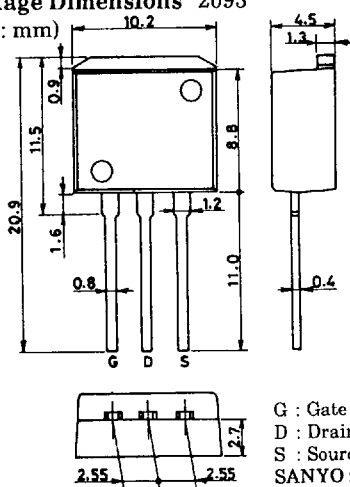
			min	typ	max	unit
D-S Breakdown Voltage	$V_{(BR)DSS}$	$I_D = 1mA, V_{GS} = 0$	450			V
Zero Gate Voltage	I_{DSS}	$V_{DS} = 450V, V_{GS} = 0$			1.0	mA
Drain Current						
Gate to Source Leakage Current	I_{GSS}	$V_{GS} = \pm 30V, V_{DS} = 0$			± 100	nA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 10V, I_D = 1mA$	2.0		3.0	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS} = 10V, I_D = 3A$	2.0	4.0		S
Static Drain to Source on State Resistance	$R_{DS(on)}$	$I_D = 3A, V_{GS} = 10V$		1.0	1.4	Ω

Continued on next page.

(Note) Be careful in handling the 2SK1691 because it has no protection diode between gate and source.

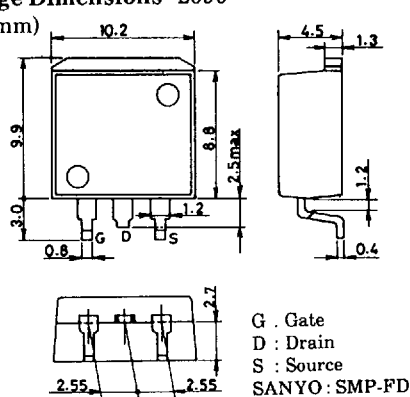
Package Dimensions 2093

(unit : mm)



Package Dimensions 2090

(unit : mm)



Continued from preceding page.

			min	typ	max	unit
Input Capacitance	C_{iss}	$V_{DS}=20V, f=1MHz$		700		pF
Output Capacitance	C_{oss}	$V_{DS}=20V, f=1MHz$		100		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS}=20V, f=1MHz$		40		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		15		ns
Rise Time	t_r	"		30		ns
Turn-OFF Delay Time	$t_{d(off)}$	"		130		ns
Fall Time	t_f	"		45		ns
Diode Forward Voltage	V_{SD}	$I_S=5A, V_{GS}=0$		1.8		V

Switching Time Test Circuit

