Ordering number : ENN7671

N-Channel Junction Silicon FET

2SK3738

Impedance Converter Applications

Application

- Impedance conversion.
- Infrared sensor.

Features

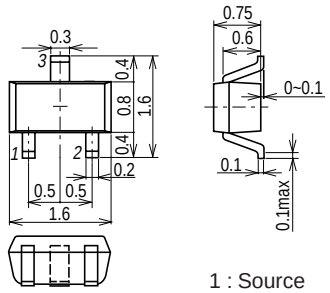
- Small I_{GSS}.
- Small Ciss.
- Ultrasmall package permitting applied sets to be small and slim.

Package Dimensions

unit : mm

2124

[2SK3738]



1 : Source
2 : Drain
3 : Gate

SANYO : SMCP

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		40	V
Gate-to-Drain Voltage	V_{GDS}		−40	V
Gate Current	I_G		10	mA
Drain Current	I_D		1	mA
Allowable Power Dissipation	P_D		100	mW
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		−55 to +150	°C

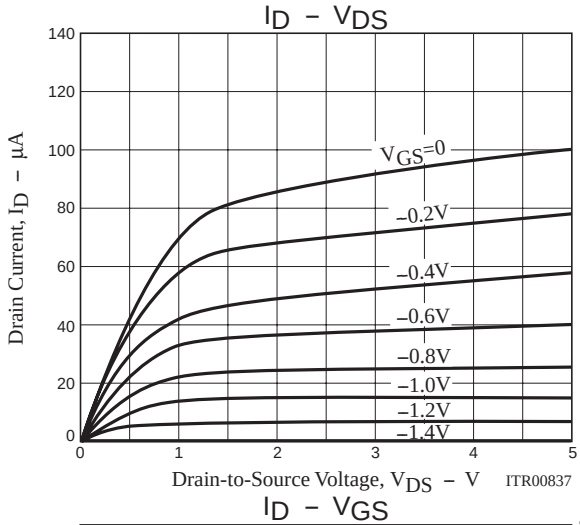
Electrical Characteristics at Ta=25°C

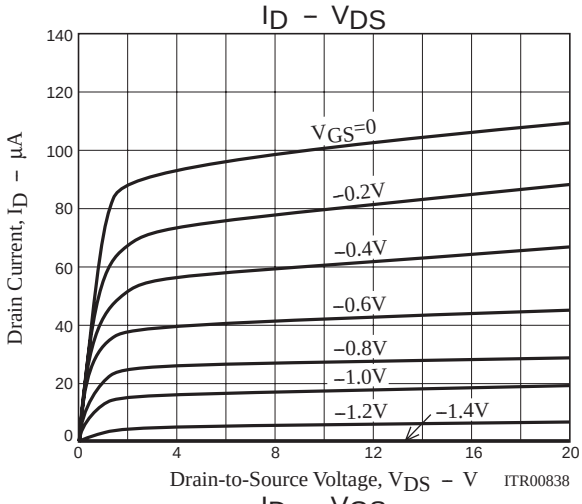
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Gate-to-Drain Breakdown Voltage	$V_{(BR)GDS}$	I_G=−10μA, V_{DS}=0	−40			V
Gate-to-Source Leakage Current	I_{GSS}	V_{GS}=−20V, V_{DS}=0			−500	pA
Cutoff Voltage	$V_{GS}(off)$	V_{DS}=10V, I_D=1μA		−1.5	−2.3	V
Zero-Gate Voltage Drain Current	I_{DSS}	V_{DS}=10V, V_{GS}=0	50		130	μA
Forward Transfer Admittance	$\|yfs\|$	V_{DS}=10V, V_{GS}=0, f=1kHz	0.06	0.13		mS
Input Capacitance	Ciss	V_{DS}=10V, V_{GS}=0, f=1MHz		1.7		pF
Reverse Transfer Capacitance	Crss	V_{DS}=10V, V_{GS}=0, f=1MHz		0.7		pF

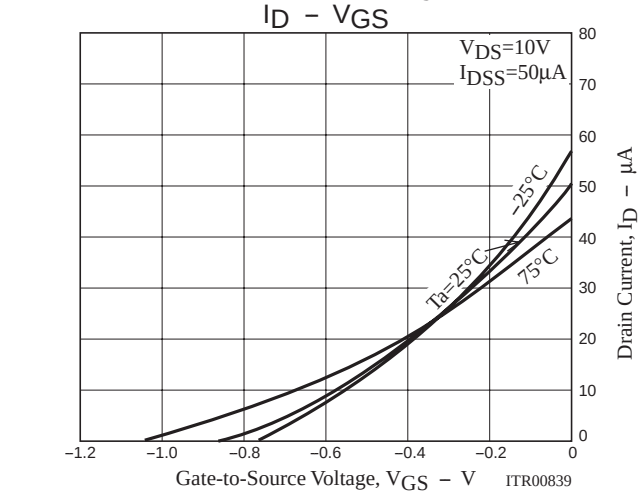
Marking : KB

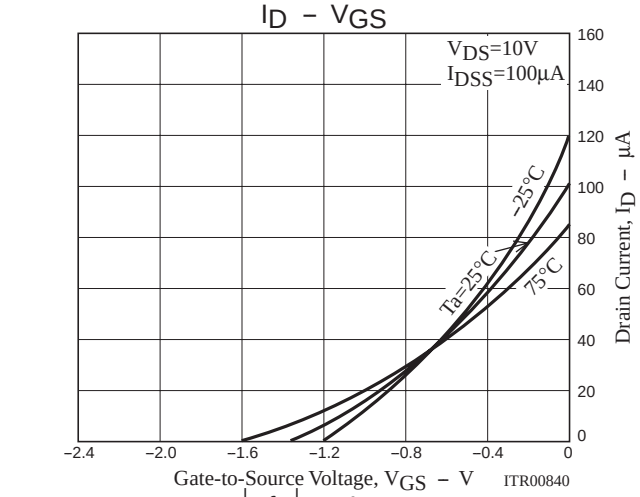
SANYO Electric Co.,Ltd. Semiconductor Company

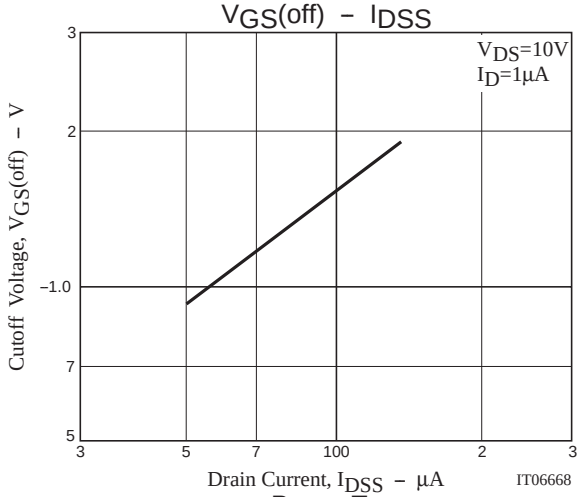
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

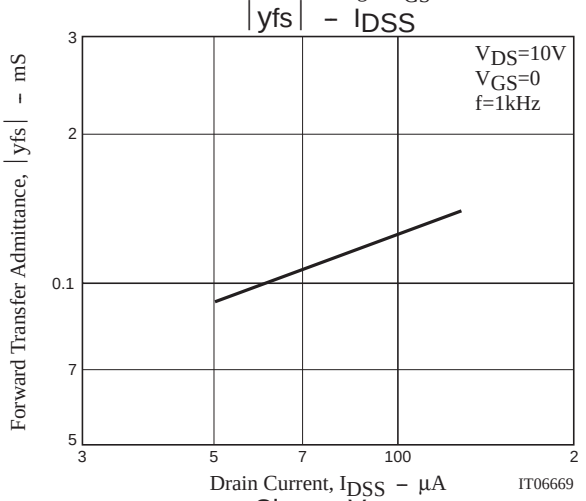

ID – VDS
Drain Current, ID – µA
Drain-to-Source Voltage, VDS – V
ITR00837
VGS=0
–0.2V
–0.4V
–0.6V
–0.8V
–1.0V
–1.2V
–1.4V

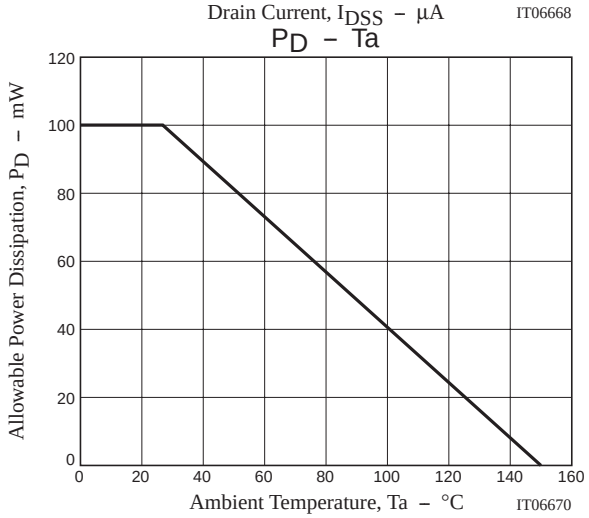

ID – VDS
Drain Current, ID – µA
Drain-to-Source Voltage, VDS – V
ITR00838
VGS=0
–0.2V
–0.4V
–0.6V
–0.8V
–1.0V
–1.2V
–1.4V

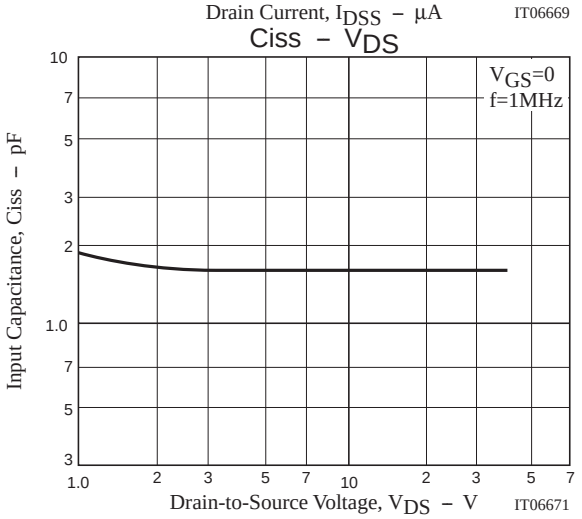

ID – VGS
VDS=10V
IDSS=50µA
–25°C
Ta=25°C
75°C
Drain Current, ID – µA
Gate-to-Source Voltage, VGS – V
ITR00839

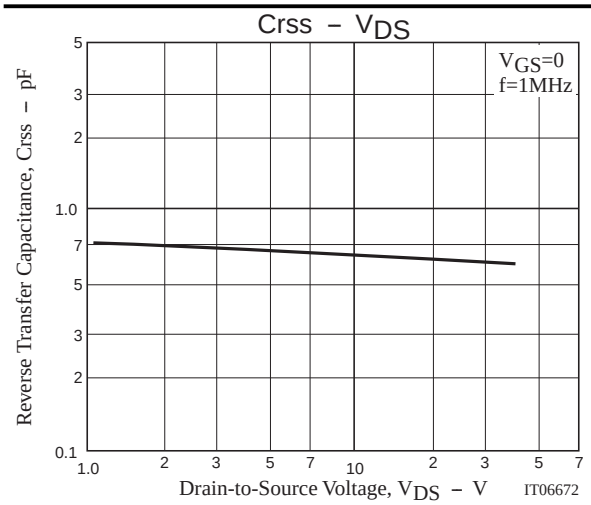

ID – VGS
VDS=10V
IDSS=100µA
–25°C
Ta=25°C
75°C
Drain Current, ID – µA
Gate-to-Source Voltage, VGS – V
ITR00840


VGS(off) – IDSS
VDS=10V
ID=1µA
Cutoff Voltage, VGS(off) – V
Drain Current, IDSS – µA
IT06668


|yfs| – IDSS
VDS=10V
VGS=0
f=1kHz
Forward Transfer Admittance, |yfs| – mS
Drain Current, IDSS – µA
IT06669


PD – Ta
Allowable Power Dissipation, PD – mW
Ambient Temperature, Ta – °C
IT06670


Ciss – VDS
VGS=0
f=1MHz
Input Capacitance, Ciss – pF
Drain-to-Source Voltage, VDS – V
IT06671



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