

**2SK3738**

Impedance Converter Applications

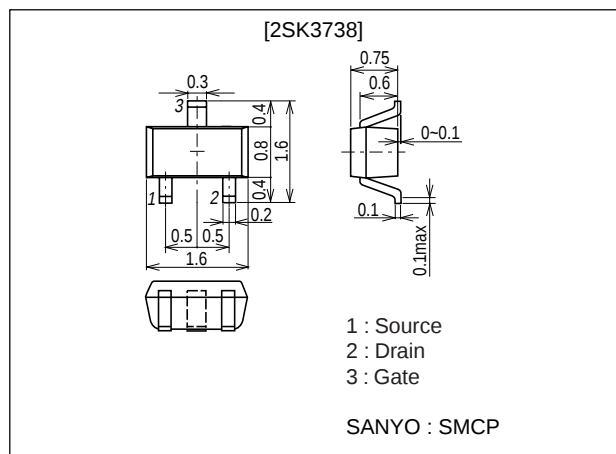
Application

- Impedance conversion.
- Infrared sensor.

Package Dimensions

unit : mm

2124



Features

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

Specifications

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

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	T_J		150	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

Electrical Characteristics at $T_a=25^\circ\text{C}$

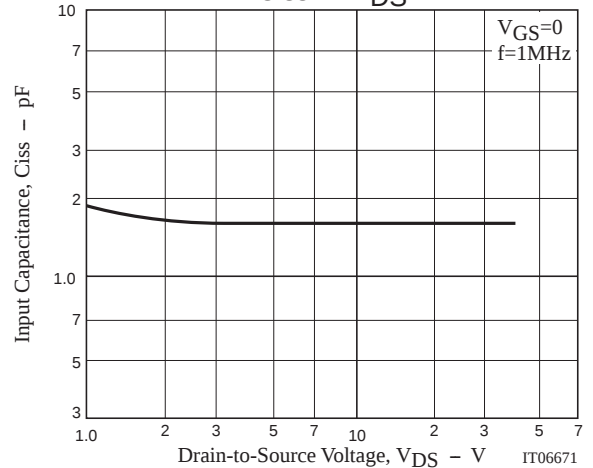
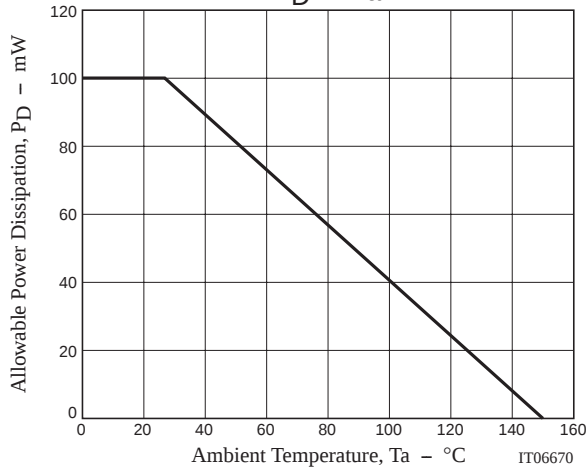
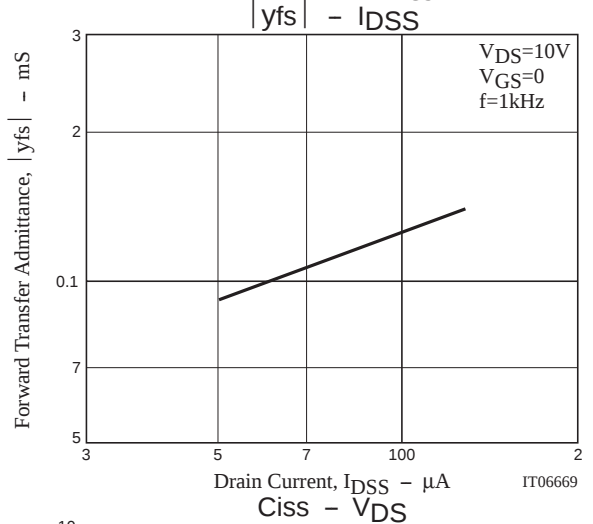
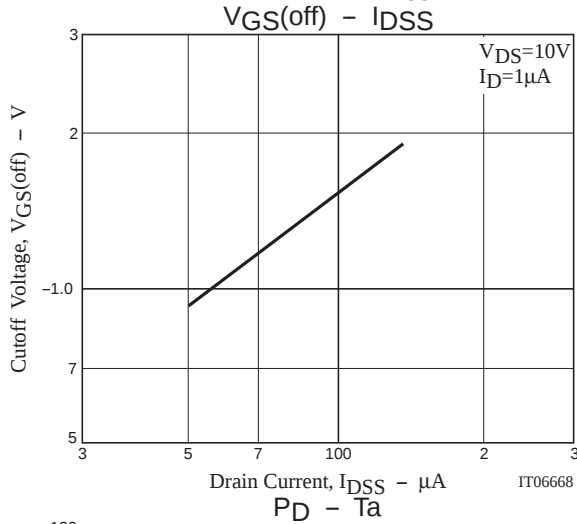
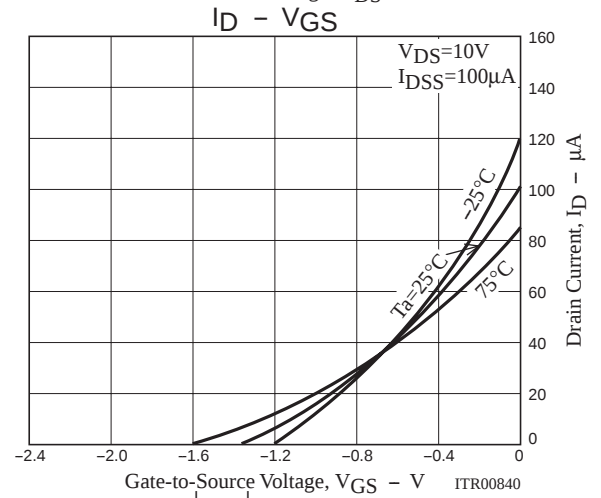
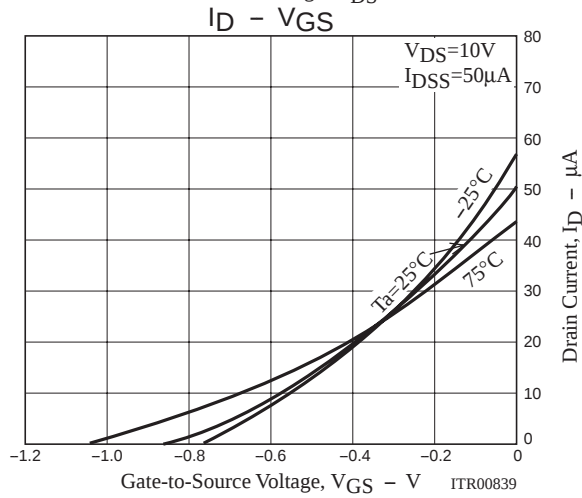
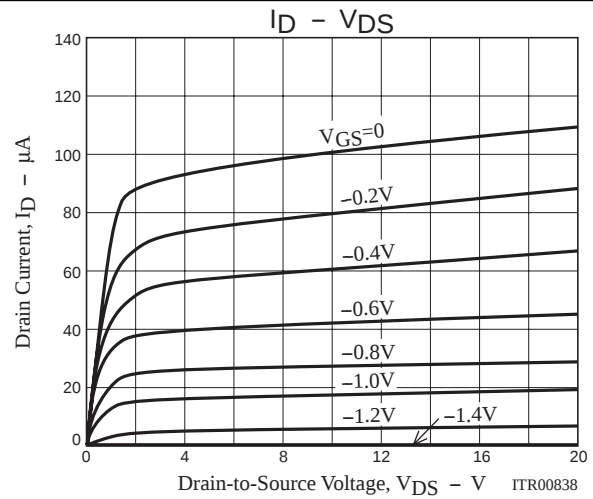
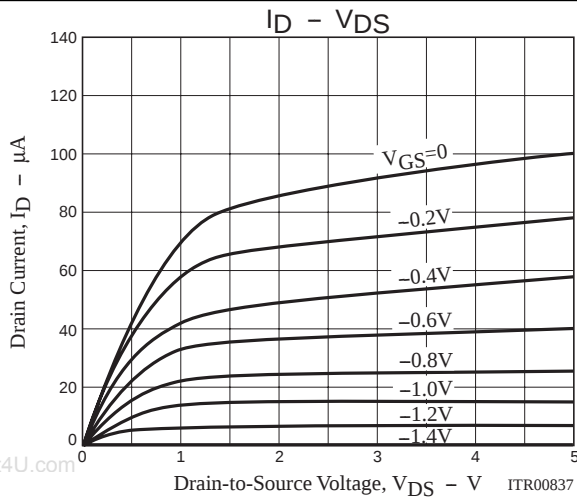
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Gate-to-Drain Breakdown Voltage	$V_{(BR)GDS}$	$I_G=-10\mu\text{A}$, $V_{DS}=0$	-40			V
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS}=-20\text{V}$, $V_{DS}=0$			-500	pA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10\text{V}$, $I_D=1\mu\text{A}$		-1.5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

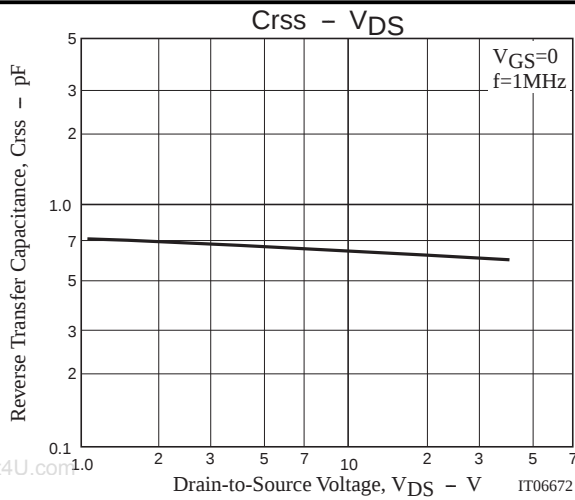
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