Ordering number : EN7671A

2SK3738

N-Channel JFET
40V, 50 to 130μA, 0.13mS, SMCP

ON Semiconductor®
http://onsemi.com

Applications

- Impedance conversion
- Infrared sensor

Features

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

Specifications

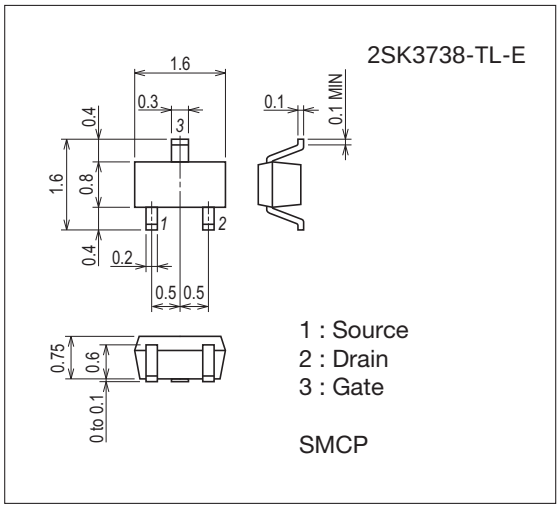
Absolute Maximum Ratings at Ta=25°C

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

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

Package Dimensions

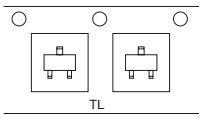
unit : mm (typ)
7027A-003



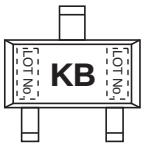
Product & Package Information

- Package : SMCP
- JEITA, JEDEC : SC-75, SOT-416
- Minimum Packing Quantity : 3,000 pcs./reel

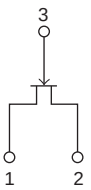
Packing Type: TL



Marking



Electrical Connection

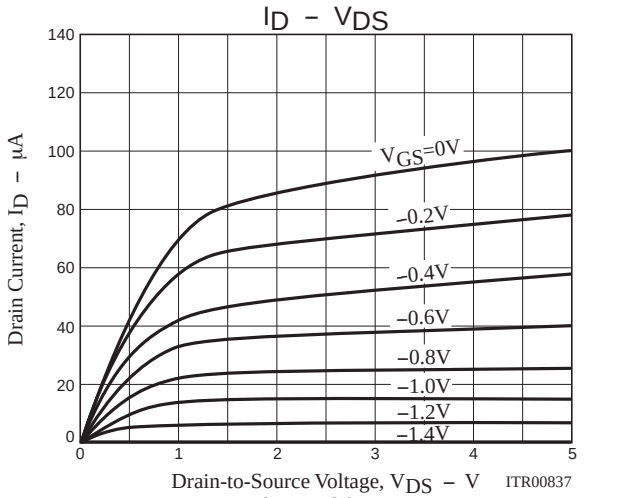


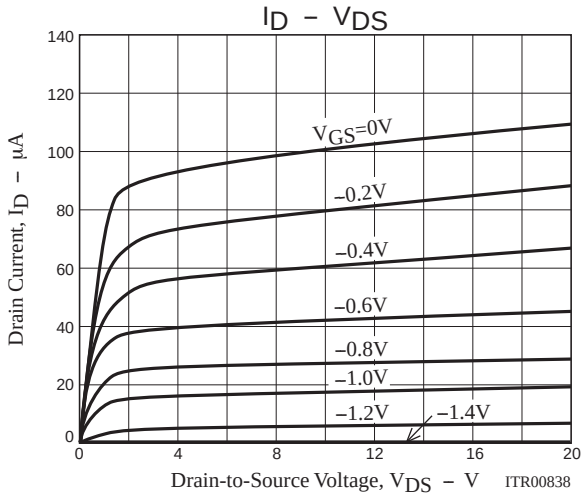
Electrical Characteristics at Ta=25°C

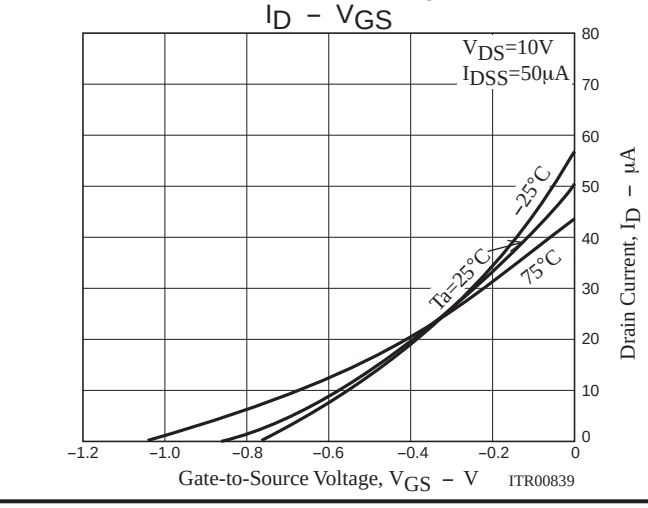
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Gate-to-Drain Breakdown Voltage	$V_{(BR)GDS}$	I_G=−10μA, V_{DS}=0V	−40			V
Gate Cutoff Current	I_{GSS}	V_{GS}=−20V, V_{DS}=0V			−500	pA
Cutoff Voltage	V_{GS}(off)	V_{DS}=10V, I_D=1μA		−1.5	−2.3	V
Drain Current	I_{DSS}	V_{DS}=10V, V_{GS}=0V	50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

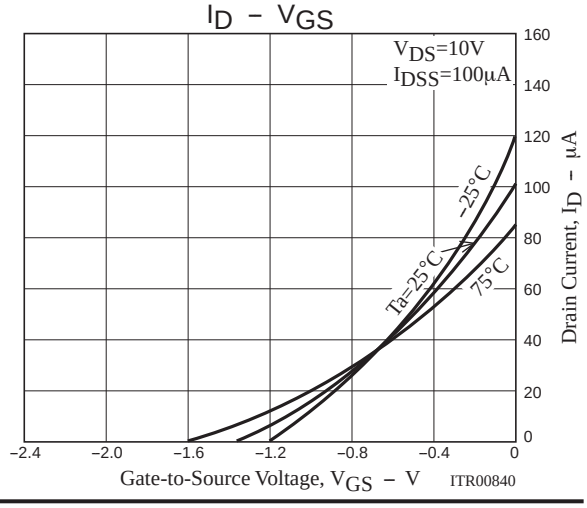
Ordering Information

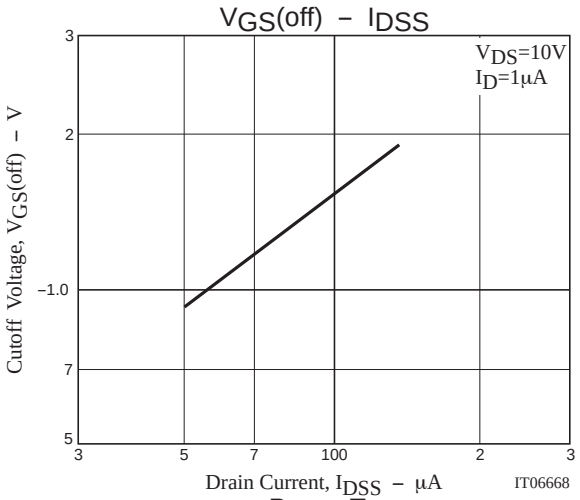
Device	Package	Shipping	memo
2SK3738-TL-E	SMCP	3,000pcs./reel	Pb Free

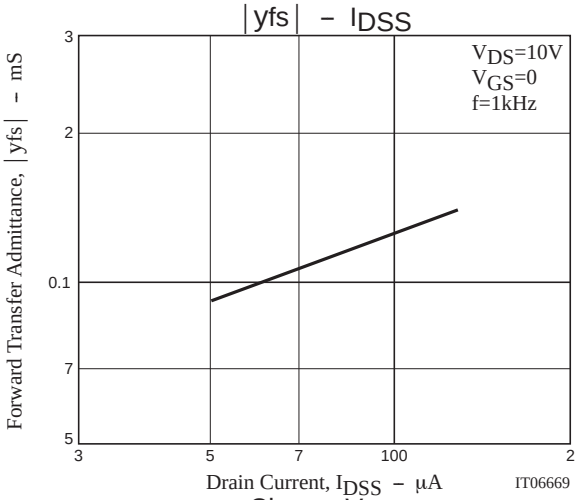


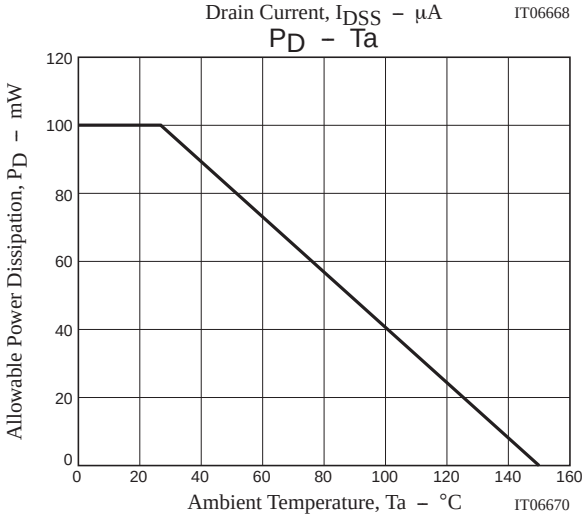


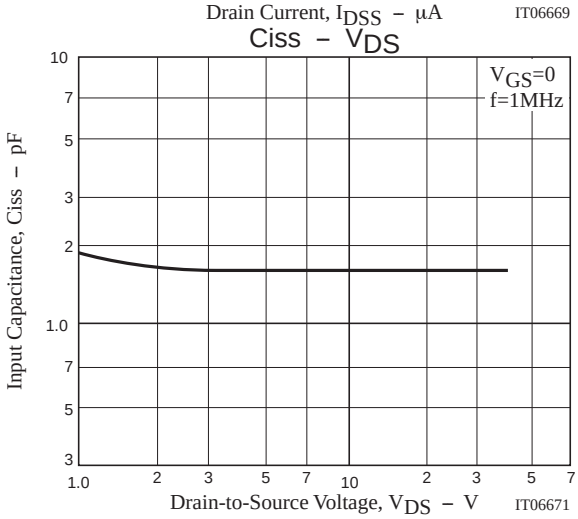


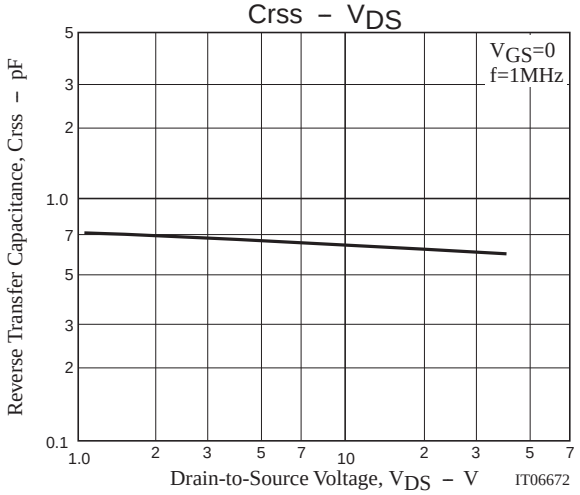



VGS(off) – IDSS
VDS=10V
ID=1μA
Cutoff Voltage, VGS(off) – V
Drain Current, IDSS – μA
IT06668


|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


Crss – VDS
VGS=0
f=1MHz
Reverse Transfer Capacitance, Crss – pF
Drain-to-Source Voltage, VDS – V
IT06672

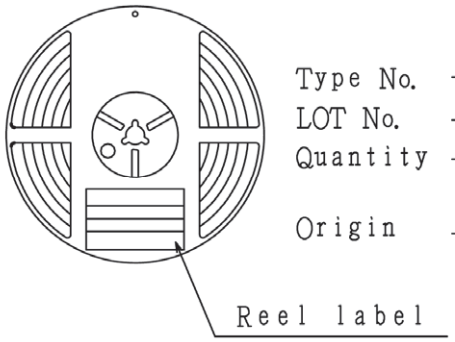
Embossed Taping Specification

2SK3738-TL-E

1. Packing Format

Package Name	Carrier Tape Type	Maximum Number of devices contained (pcs)			Packing format	
		Reel	Inner box	Outer box	Inner BOX (C-1)	Outer BOX (A-7)
SMCP	SMCP	3,000	15,000	90,000	5 reels contained Dimensions:mm (external) 183×72×185	6 inner boxes contained Dimensions:mm (external) 440×195×210

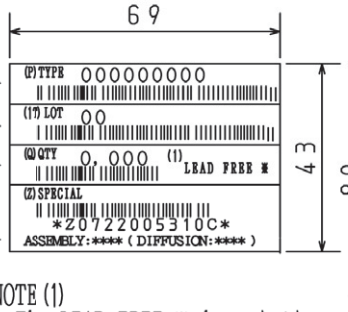
Packing method



Reel label

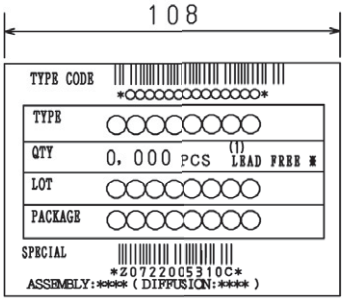
Reel label, Inner box label

(unit:mm)



Outer box label

It is a label at the time of factory shipments. The form of a label may change in physical distribution process.

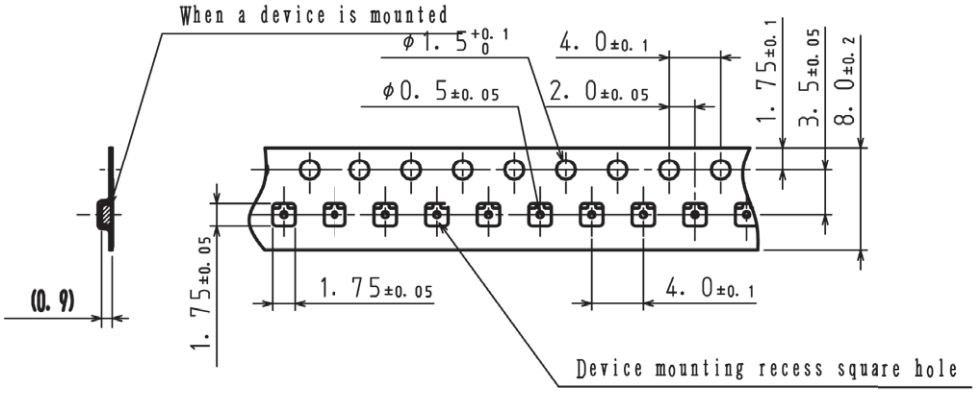


NOTE (1)
The LEAD FREE ※ description shows that the surface treatment of the terminal is lead free.

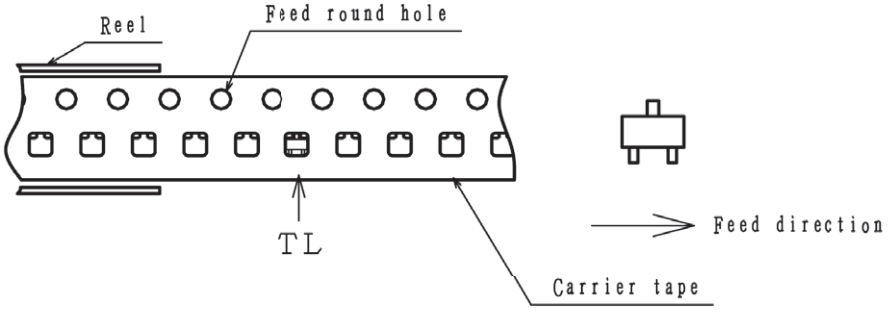
Label	JEITA Phase
••••••••••	JEITA Phase 3

2. Taping configuration

2-1. Carrier tape size (unit:mm)



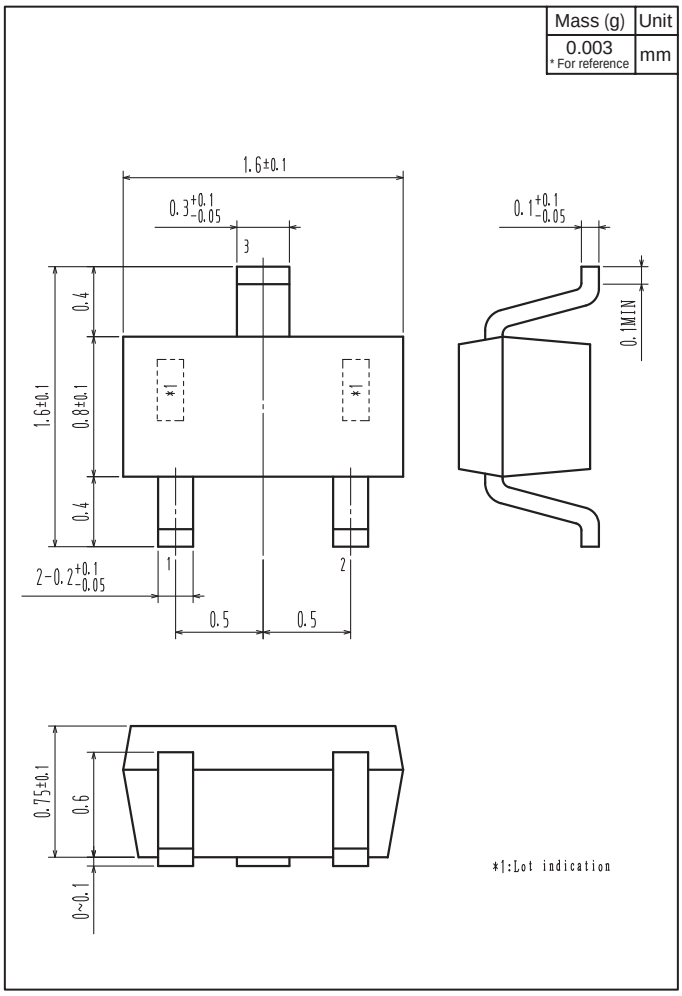
2-2. Device placement direction



Those with one electrode terminal on the feed hole side·····TL

Outline Drawing

2SK3738-TL-E



Land Pattern Example