



SANYO Semiconductors

# DATA SHEET

An ON Semiconductor Company

N-Channel Junction Silicon FET

## EC3A04B — Low-Frequency General-Purpose Amplifier, Impedance Converter Applications

### Applications

- Low-frequency general-purpose amplifier, impedance conversion, infrared sensor applications.

### Features

- Small  $I_{GSS}$ .
- Small  $C_{iss}$ .
- Ultraminiature package facilitates miniaturization in end products.
- Halogen free compliance (UL94HB).

### Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	$V_{DSX}$		30	V
Gate-to-Drain Voltage	$V_{GDS}$		-30	V
Gate Current	$I_G$		10	mA
Drain Current	$I_D$		10	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	$V_{(BR)GDS}$	$I_G=-10\mu\text{A}, V_{DS}=0\text{V}$	-30			V
Gate-to-Source Leakage Current	$I_{GSS}$	$V_{GS}=-20\text{V}, V_{DS}=0\text{V}$			-1.0	nA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10\text{V}, I_D=1\mu\text{A}$	-0.18	-0.65	-2.2	V

Marking : KC

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# EC3A04B

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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain Current	$I_{DSS}$	$V_{DS}=10V, V_{GS}=0V$	0.6*		3.0*	mA
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10V, V_{GS}=0V, f=1kHz$	3.0	5.0		mS
Input Capacitance	$C_{iss}$	$V_{DS}=10V, V_{GS}=0V, f=1MHz$		4		pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS}=10V, V_{GS}=0V, f=1MHz$		1.1		pF
Static Drain-to-Source On-State Resistance	$R_{DS(on)}$	$V_{DS}=10mV, V_{GS}=0V$		200		$\Omega$

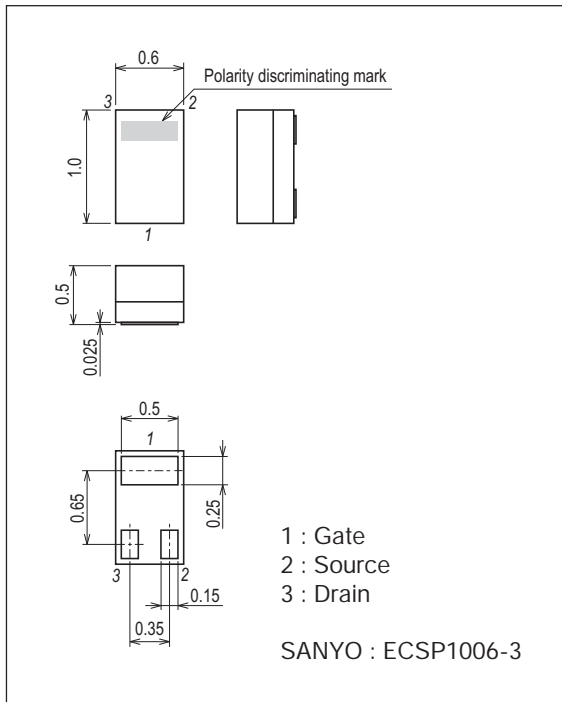
\* : The EC3A04B is classified by  $I_{DSS}$  as follows : (unit : mA).

Rank	2	3
$I_{DSS}$	0.6 to 1.5	1.2 to 3.0

## Package Dimensions

unit : mm (typ)

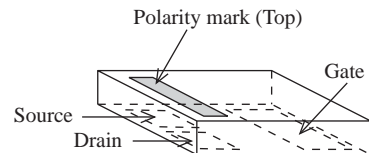
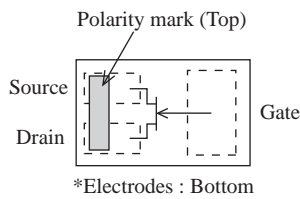
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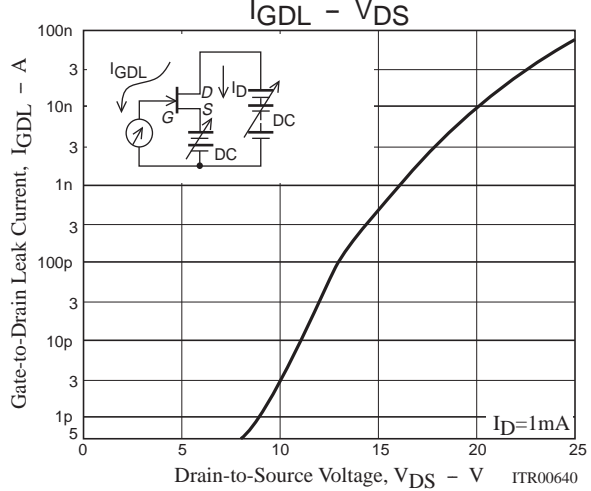
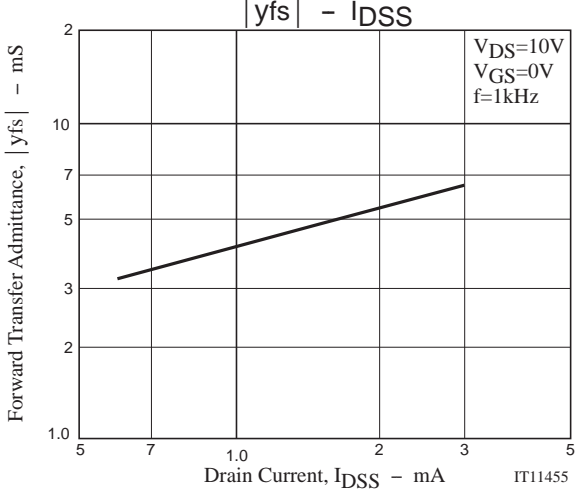
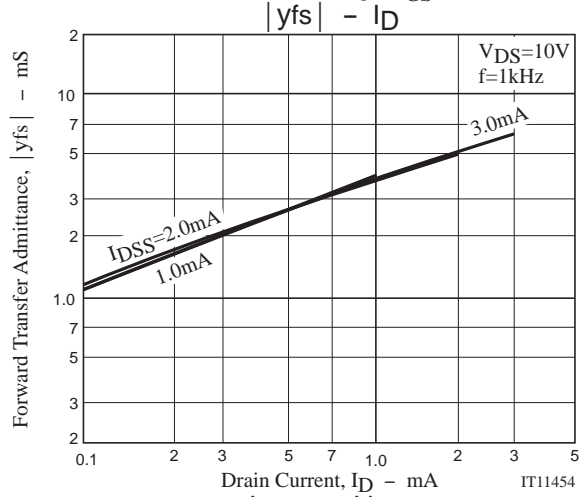
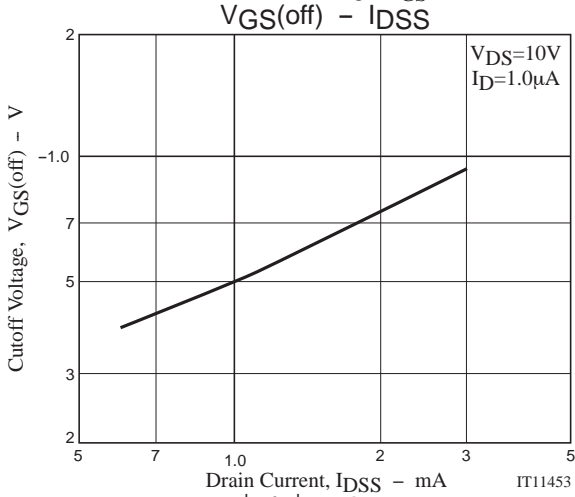
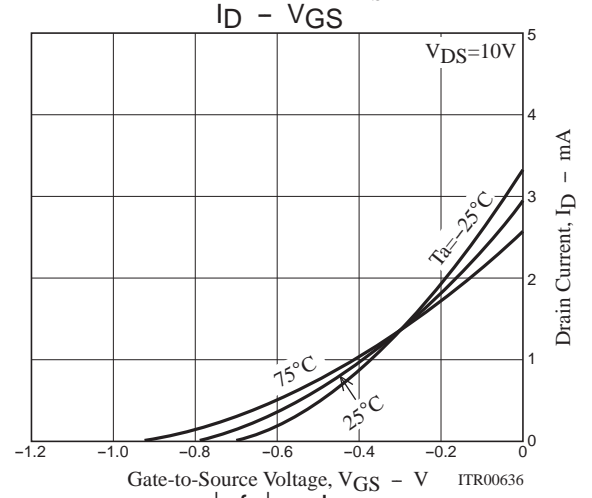
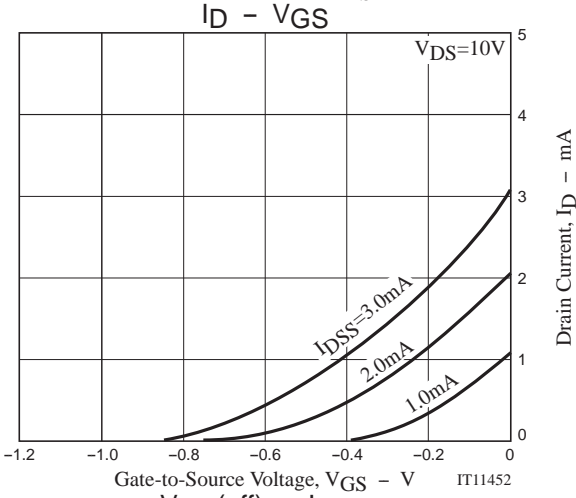
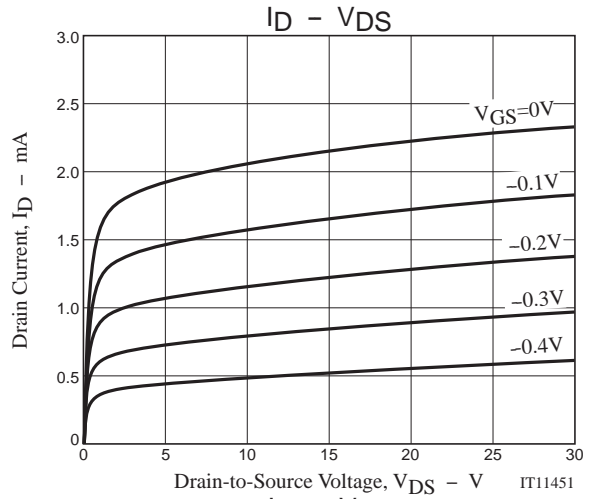
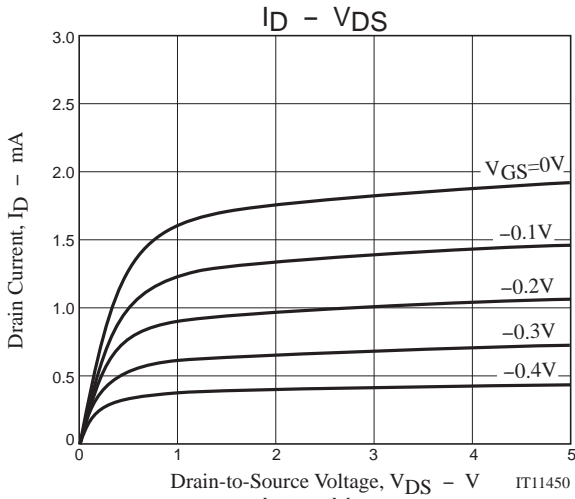


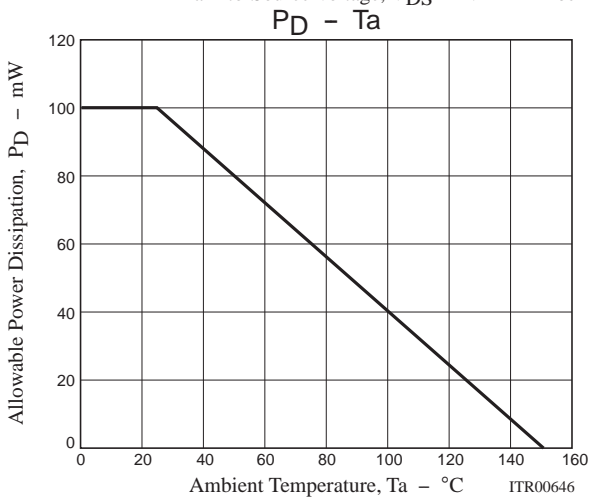
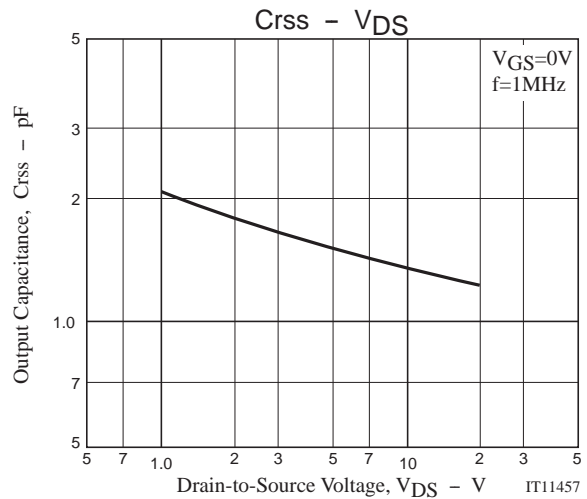
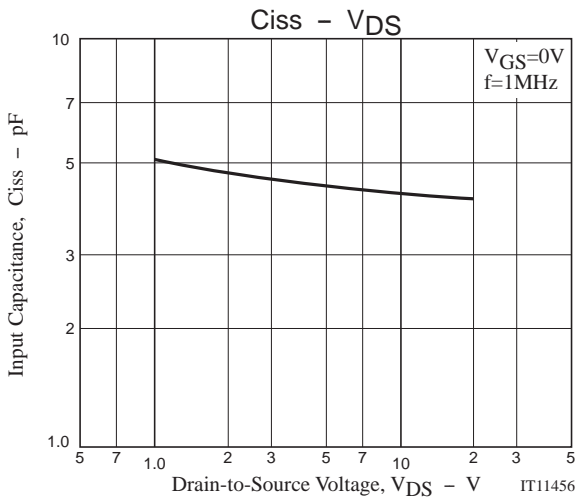
## Type No. Indication (Top view)



## Electrical Connection (Top view)







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