



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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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		Ω

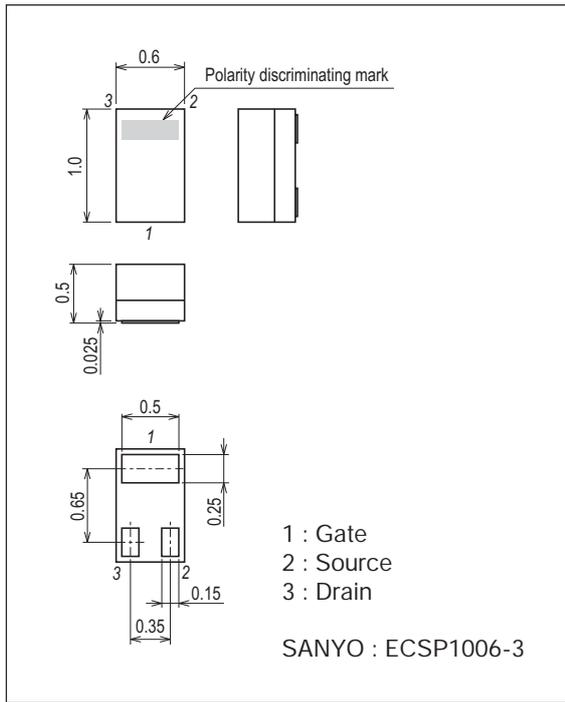
* : The EC3A04B is classified by I_{DSS} as follows : (unit : mA).

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

Package Dimensions

unit : mm (typ)

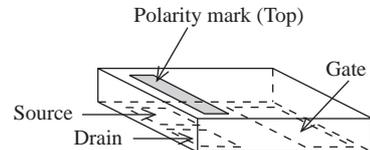
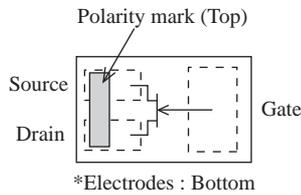
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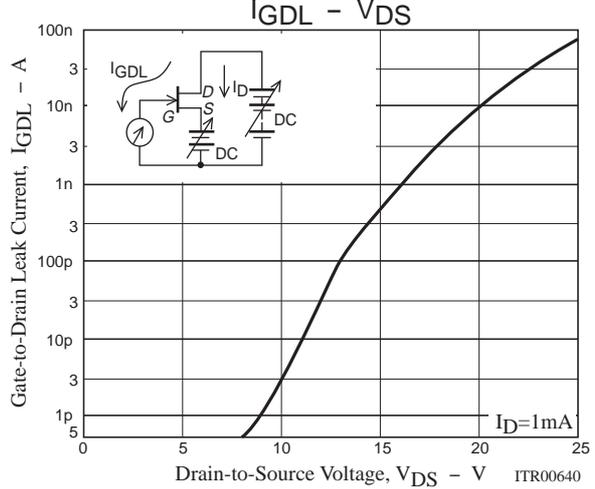
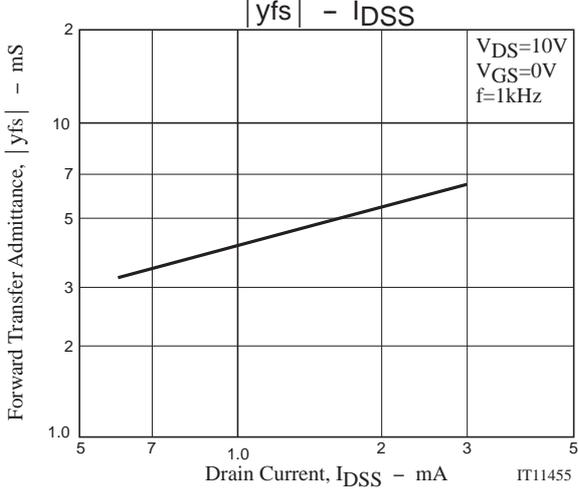
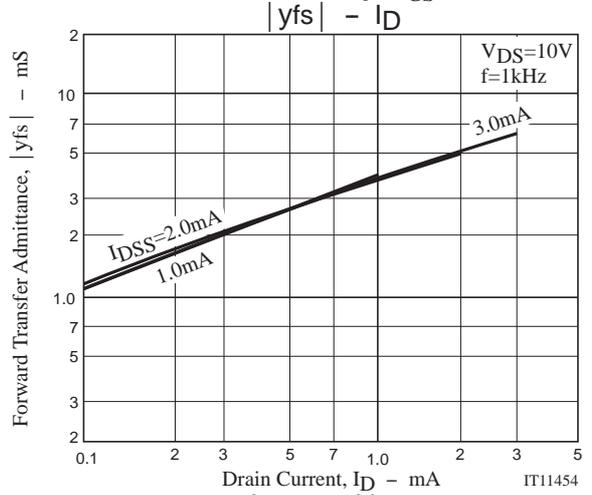
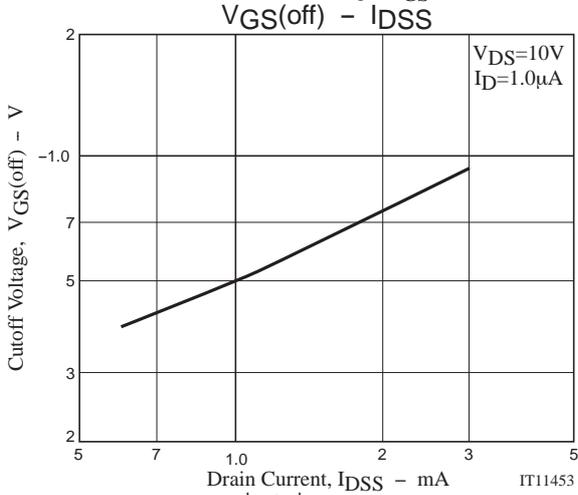
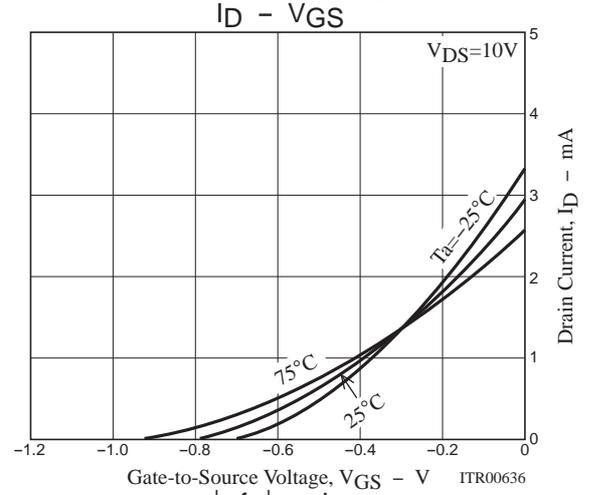
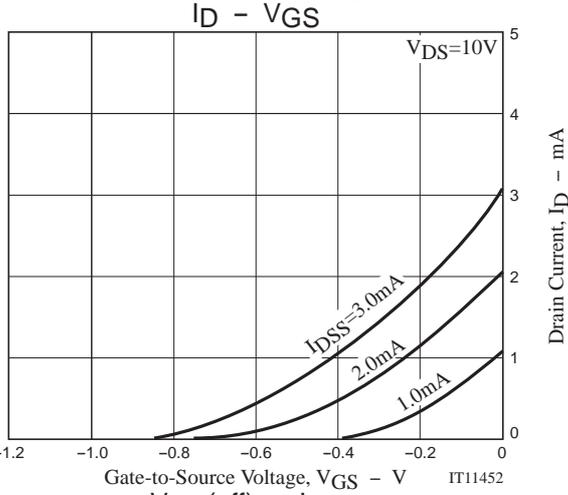
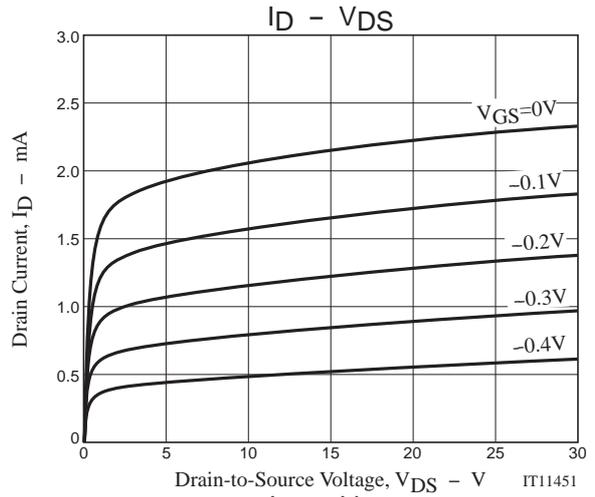
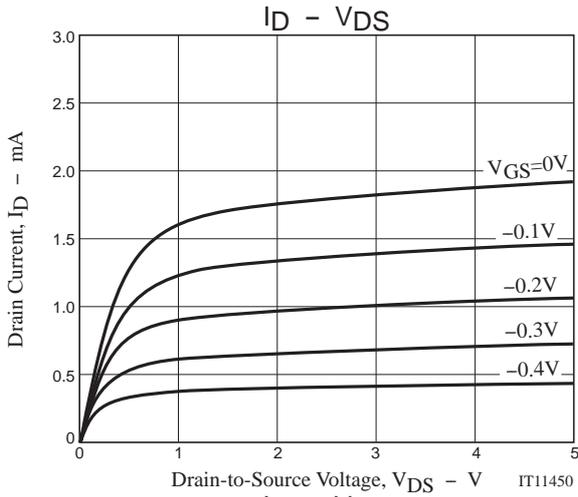
Type No. Indication (Top view)

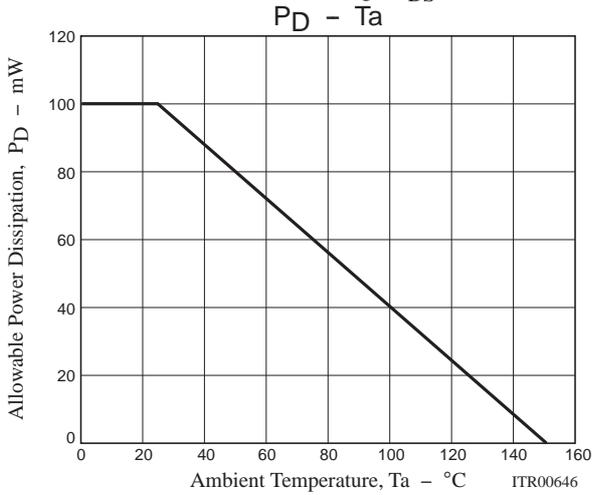
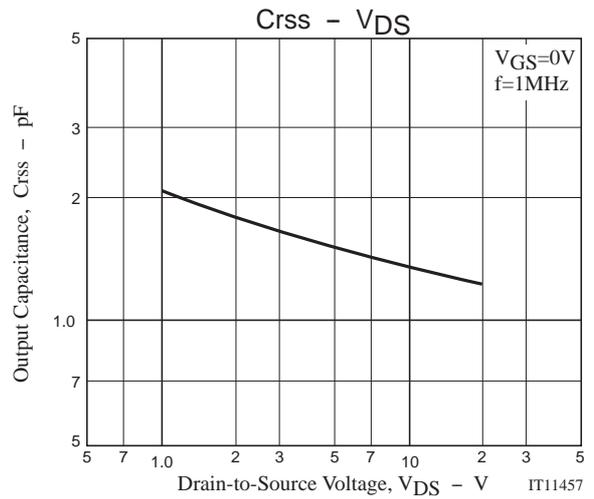
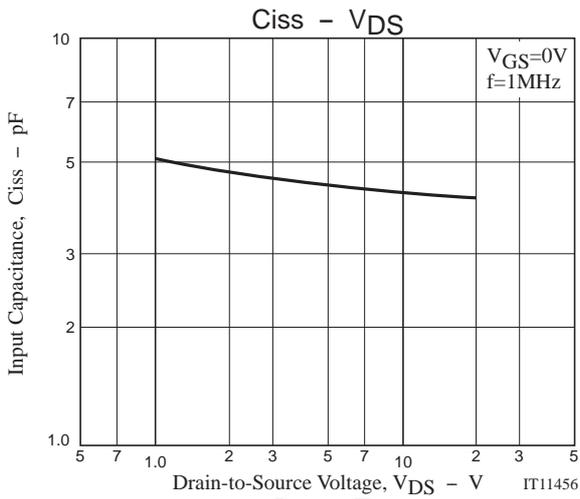


Electrical Connection (Top view)



EC3A04B





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