GMTJ9973
P-CHANNEL JFET SWITCH

Great Mixed Signal Technologies

DESCRIPTION

The GMT J9973 JFET is designed for applications needing the unique features that only a JFET offers, such as high linearity, tightly controlled drain characteristics and the ability to custom tailor the device to meet customer requirements. Please contact GMT Applications Engineering for further details.

FEATURES

• SOT-23 Three Lead Package.
• Tight Rds (on) Specification.
• Available in Tape and Reel for Automated Assembly.

APPLICATIONS

• Analog Switches.
• Chopper Stabilized Amplifiers.
• Commutators.
• Normally "ON" Switches.
• Current Limiters.
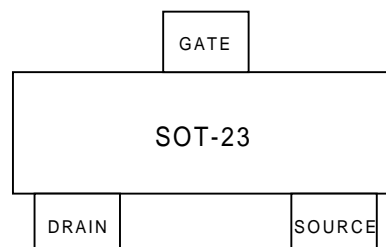• Low Level Analog Sample and Hold Circuits.

ABSOLUTE MAXIMUM RATINGS

(TA = 25°C unless otherwise specified)

Gate to Drain Voltage..................................... 30 V
Gate to Source Voltage.................................. 30 V
Forward Gate Current .... 50 mA
Storage Temperature Range........................... -55°C to 150°C
Operating Junction Temperature Range .... -55°C to 150°C

Note: Stresses above those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions above those listed in the electrical specifications is not implied. Exposure to the absolute maximum rating conditions for extended periods may affect device reliability.
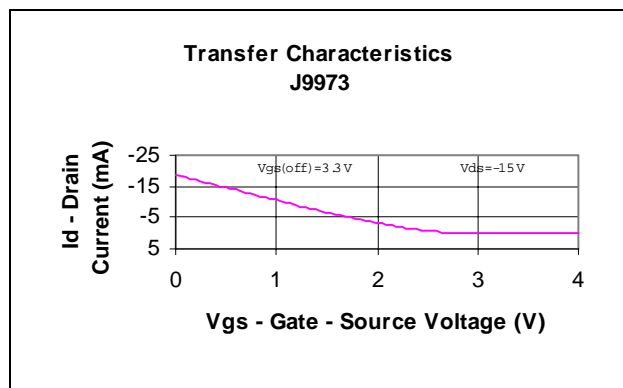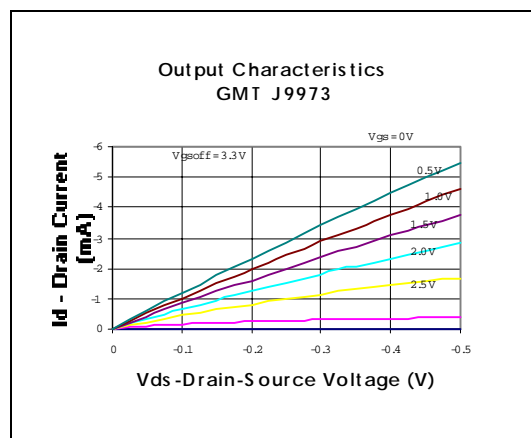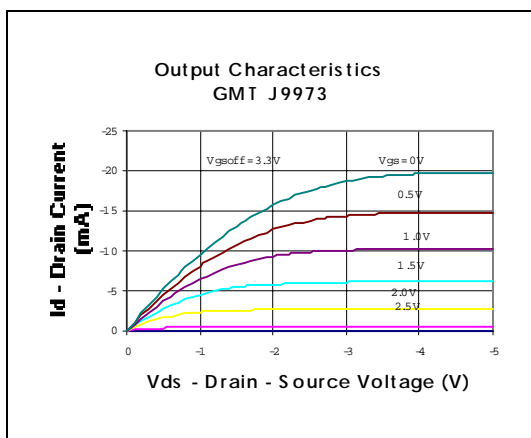
Table 1: THERMAL CHARACTERISTICS

SYMBOL	CHARACTERISTIC	MAX	UNITS
P_D	Total Device Dissipation Derate above 25°C	350 2.8	mW mW/°C
$R_{\theta JC}$	Thermal Resistance, Junction to Case	125	°C/W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	357	°C/W

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Table 2: ELECTRICAL SPECIFICATIONS

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNITS
BVgss	Gate-source breakdown voltage	Vds = 0.0 V, Ig = 1.0 uA	20		V
Igss	Gate reverse current	Vds = 0.0 V, Vgs = 15 V		1.0	nA
Vgs(off)	Gate-source cutoff voltage	Vds = -15 V, Ids = -10 nA	1.0	6.0	V
Idss	Zero-gate voltage drain current @Vds = -15 V	Vds = -15 V, Vgs = 0.0 V	-1.5	-80	mA
IdIA	Zero gate Drain current @ Vds = -0.75 V	Vgs = 0.0 V, Vds = -0.75 V	-7.0		mA
IdIB	Drain current	Vgs = 2.1 V, Vds = -0.75 V		-2.8	mA
Rds(on)	Drain-source on resistance	Vgs = 0.0 V, Id = -7.0 mA	75	105	ohms

Output Characteristics
GMT J9973

Output Characteristics
GMT J9973

Transfer Characteristics
J9973

LIFE SUPPORT USAGE POLICY:

GMT's products are not authorized for use as critical components in life support devices or systems without the express written approval of the CEO of GMT. As used herein:

(a) Life support devices or systems are devices or systems which (1) are intended for surgical implant into the body, or (2) support or sustain life, and whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury to the user.

(b) A critical component in any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system.

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