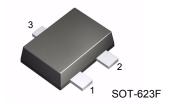


FJZ594J

Capacitor Microphone Applications

- Especially Suited for use in Audio, Telephone Capacitor Microphones
- Excellent Voltage Characteristic
- · Excellent Transient Characteristic



1. Drain 2. Source 3. Gate

Si N-channel Junction FET

Absolute Maximum Ratings Ta=25°C unless otherwise noted

Symbol	Parameter	Ratings	Units
V_{GDO}	Gate-Drain Voltage	-20	V
I _G	Gate Current	10	mA
I _D	Drain Current	1	mA
P_{D}	Power Dissipation	100	mW
T _J	Junction Temperature	150	°C
T _{STG}	Storage Temperature	-55 ~ 150	°C

Electrical Characteristics T_a=25°C unless otherwise noted

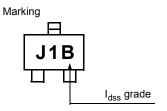
Symbol	Parameter	Test Condition	Min.	Тур.	Max.	Units
BV_{GDO}	Gate-Drain Breakdown Voltage	I _G = -100uA	-20			V
V _{GS} (off)	Gate-Source Cut-off Voltage	V _{DS} =5V, I _D =1μA		-0.6	-1.5	V
I _{DSS}	Drain Current	V _{DS} =5V, V _{GS} =0	150		350	μΑ
ly _{fs} l	Forward Transfer Admittance	V _{DS} =5V, V _{GS} =0, f=1MHz	0.4	1.2		mS
C _{ISS}	Input Capacitance	V _{DS} =5V, V _{GS} =0, f=1MHz		3.5		pF
C _{RSS}	Output Capacitance	V _{DS} =5V, V _{GS} =0, f=1MHz		0.65		pF

Thermal Characteristics $T_C=25$ °C unless otherwise noted

Symbol	Parameter	Max	Units	
$R_{\theta jA}$	Thermal Resistance, Junction to Ambient	1250	°C/W	

I_{DSS} Classification

Classification	В	С
I _{DSS} (μA)	150 ~ 240	210 ~ 350



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Typical Characteristics

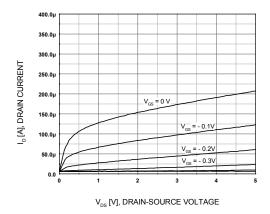


Figure 1. Static Characteristics

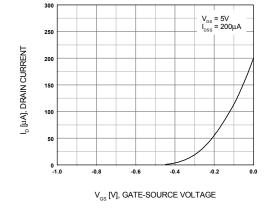


Figure 2. Transfer Characteristic

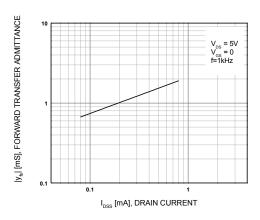


Figure 3. Forward Transfer Admittance

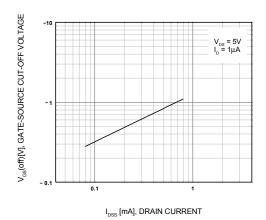


Figure 4. Cut-Off Voltage

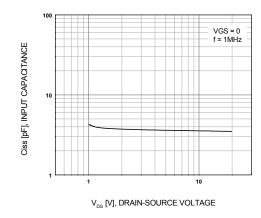


Figure 5. Input Capacitance

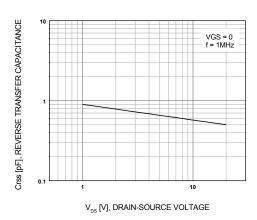


Figure 6. Reverse Transfer Capacitance

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Typical Characteristics (Continued)

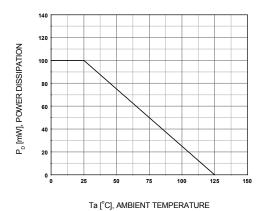
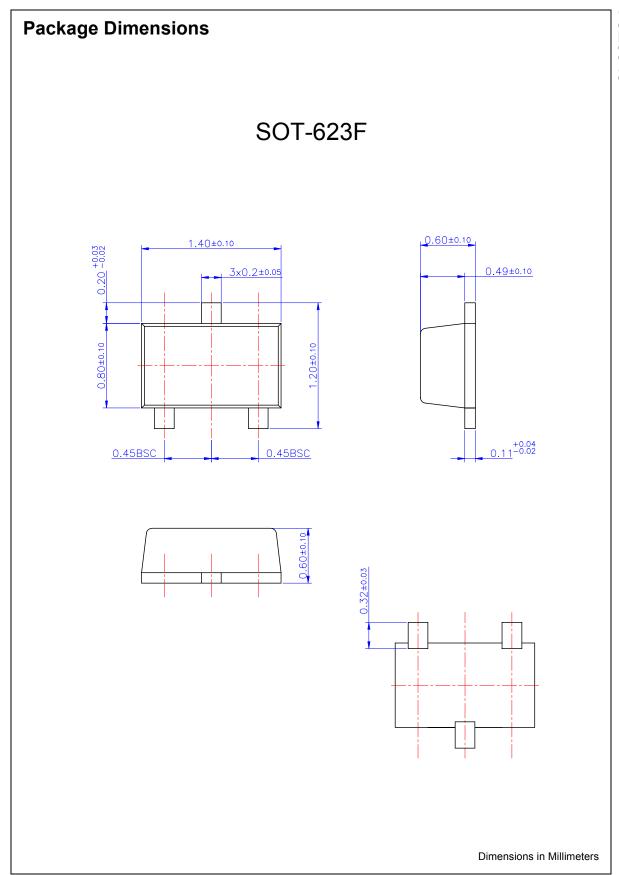


Figure 7. Power Derating

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CoolFET™	FASTr™	MicroFET™	Power_Trench®	SuperSOT™-6
$CROSSVOLT^{\text{TM}}$	FRFET™	MicroPak™	QFET [®]	SuperSOT™-8
DOME™	GlobalOptoisolator™	MICROWIRE™	QS™	SyncFET™
EcoSPARK™	GTO™	MSX™	QT Optoelectronics™	TinyLogic [®]
E ² CMOS™	HiSeC™	MSXPro™	Quiet Series™	TruTranslation™
EnSigna™	I ² C™	OCX™	RapidConfigure™	UHC™
Across the board.	Around the world.™	OCXPro™	RapidConnect™	UltraFET [®]
The Power Franchise™		OPTOLOGIC [®]	SILENT SWITCHER®	VCX™
Programmable Ad	ctive Droop™	OPTOPLANAR™	SMART START™	

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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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