

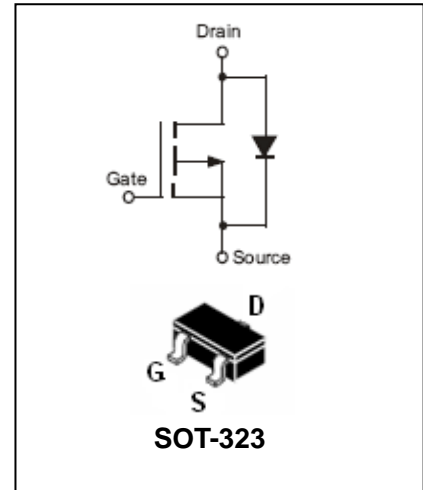
## P-Channel Enhancement Mode Field Effect Transistor

### FEATURES

- Low On-Resistance.
- Low Gate Threshold Voltage.
- Low Input Capacitance.
- Fast Switching Speed.
- Available in Lead Free Version.



Lead-free



### APPLICATIONS

- P-channel enhancement mode effect transistor.

### ORDERING INFORMATION

Type No.	Marking	Package Code
6GG1SÜ	K84	SOT-323

### MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Units
V <sub>DSS</sub>	Drain-Source voltage	-50	V
V <sub>DGR</sub>	Drain-Gate voltage	-50	V
V <sub>GSS</sub>	Gate -Source voltage	continuous ± 20	V
I <sub>D</sub>	Drain current (Note1)	continuous -130	mA
P <sub>D</sub>	Power Dissipation (Note1)	200	mW
R <sub>θJA</sub>	Thermal resistance, Junction-to-Ambient	625	°C/W
T <sub>J</sub> , T <sub>stg</sub>	Junction and Storage Temperature	-55 to +150	°C

Note: 1. Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch; pad layout as shown on GALAXY Inc. suggested pad layout document AP02001.

P-Channel Enhancement Mode Field Effect Transistor

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0V, I_D=-250\mu A$	-50	-75	-	V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=-1mA$	-0.8	-1.6	-2.0	
Gate-body Leakage      Forward Reverse	$I_{GSS}$	$V_{DS}=0V, V_{GS}=20V$ $V_{DS}=0V, V_{GS}=-20V$	- -	- -	100 -100	nA
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=-50V, V_{GS}=0V, T_J = 25^\circ C$	-	-	-15	$\mu A$
		$V_{DS}=-50V, V_{GS}=0V, T_J = 125^\circ C$			-60	
		$V_{DS}=-25V, V_{GS}=0V, T_J = 25^\circ C$	-	-	-100	
Forward transconductance	$g_{FS}$	$V_{DS}=-25V, I_D=100mA$	50	-	-	mS
Static drain-Source on-resistance	$R_{DS(ON)}$	$V_{GS}=-5.0V, I_D=100mA$	-	6	10	$\Omega$
Input capacitance	$C_{ISS}$	$V_{DS}=-25V, V_{GS}=0V, f=1.0MHz$	-	-	45	$\mu F$
Output capacitance	$C_{OSS}$		-	-	25	
Reverse transfer capacitance	$C_{RSS}$		-	-	12	
Turn-On Delay Time	$t_{D(ON)}$	$V_{DD} = -30V, I_D = -0.27A,$ $V_{GS} = -10V, R_{GEN} = 50\Omega$	-	10	-	ns
Turn-Off Delay Time	$t_{D(OFF)}$		-	18	-	ns

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TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

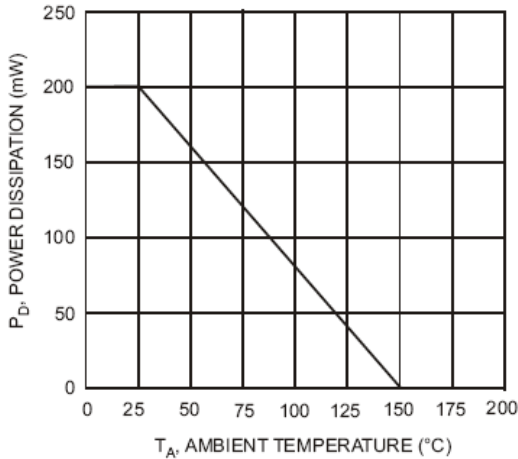


Fig. 1, Max Power Dissipation vs Ambient Temperature

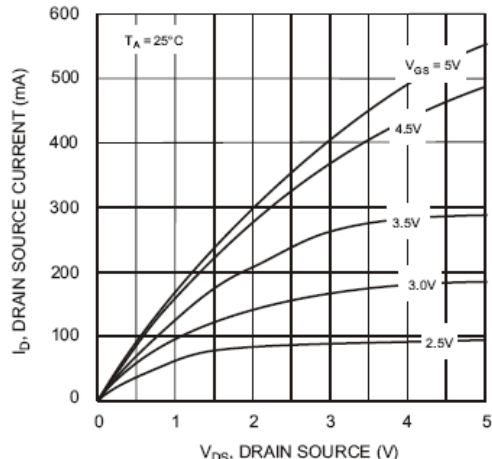


Fig. 2, Drain Source Current vs. Drain Source Voltage

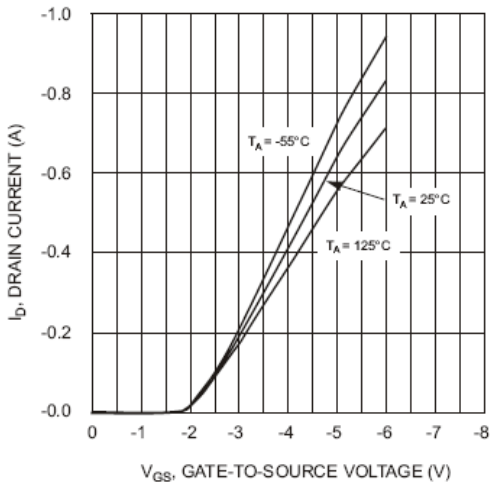


Fig. 3, Drain Current vs. Gate Source Voltage

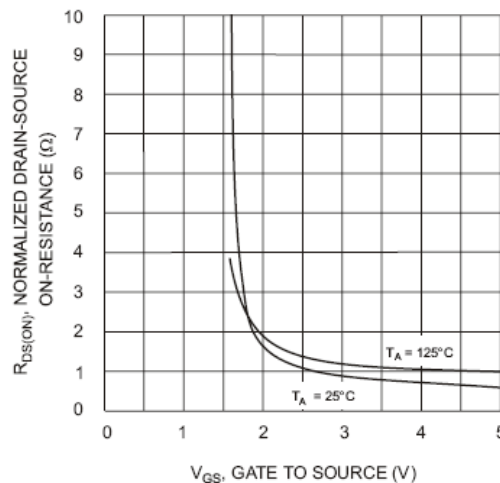


Fig. 4, On Resistance vs. Gate Source Voltage

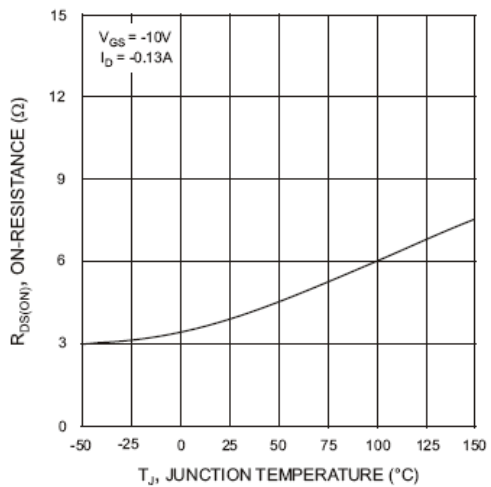


Fig. 5, On-Resistance vs. Junction Temperature

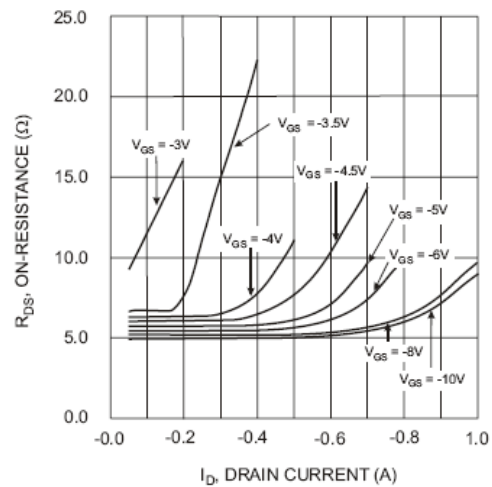


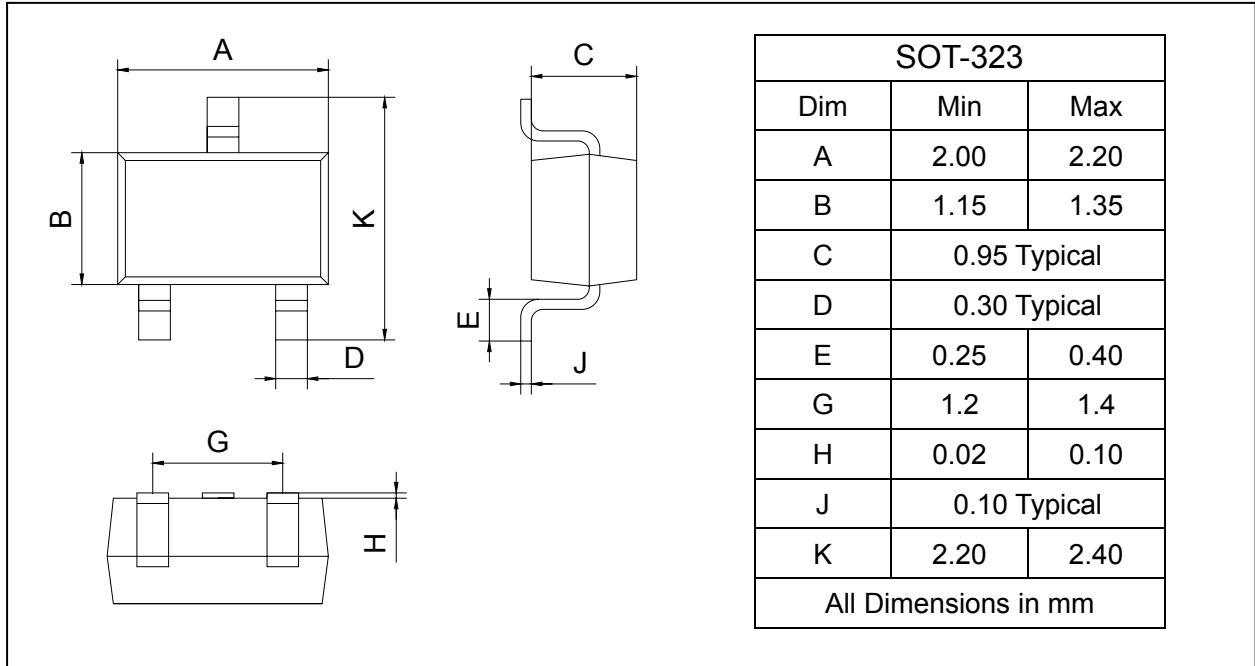
Fig. 6, On-Resistance vs. Drain Current

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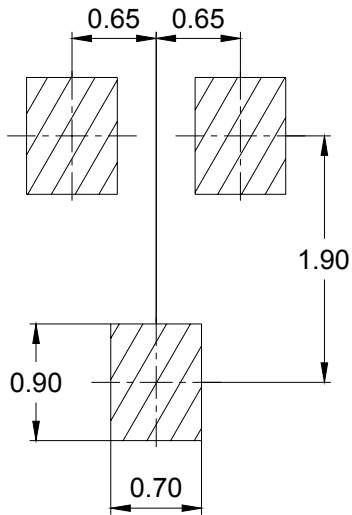
### PACKAGE OUTLINE

Plastic surface mounted package

SOT-323



### SOLDERING FOOTPRINT



### PACKAGE INFORMATION

Device	Package	Shipping
6 GG, ( ? F	SOT-323	3000/Tape&Reel