Solid State Devices, Inc.
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Phone: (562) 404-7855 * Fax: (562) 404-1773
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SFF7002KA2GW

Dual Microminiature Package
300 mA 60 Volts 2 Ω
Dual N-Channel Logic Level
TrenchFET MOSFET

DESIGNER'S DATA SHEET

Part Number / Ordering Information [1/]

SFF7002KA2 ___ ___

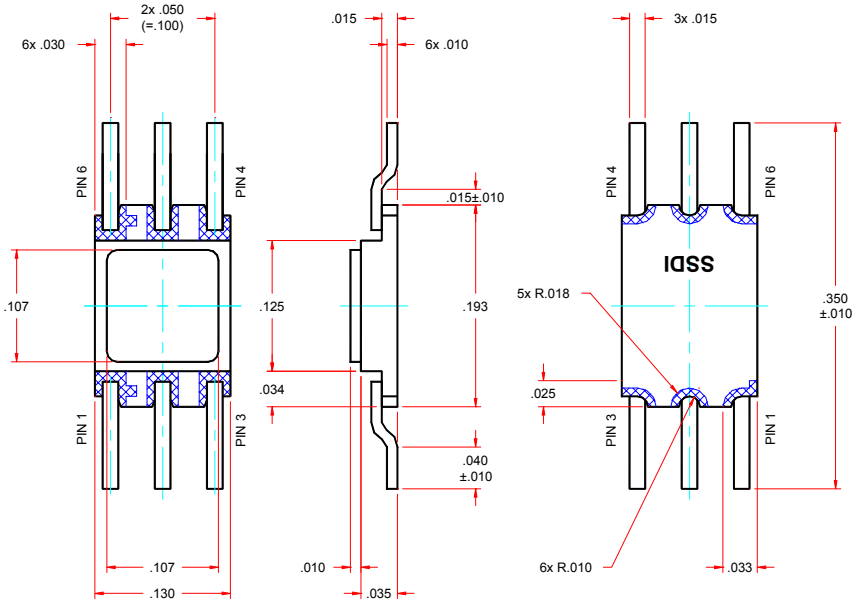
Screening [2/] ___ = Not Screened
TX = TX Level
TXV = TXV Level
S = S Level

Package [3/] GW = GULLWING

Features:
- Low On-resistance, < 2 ohm
- Low Input Capacitance, < 25 pF
- Low threshold voltage, < 2 V
- Fast switching, < 25 ns
- TX, TXV, and S-Level Screening Available. Consult Factory

Maximum Ratings		Symbol	Value	Units
Gate – Source Voltage		V_{GS}	20	Volts
Drain to Source Voltage		V_{DS}	60	Volts
Continuous Drain Current	T_A= 25°C T_A= 100°C	I_D	300 190	mA
Instantaneous (pulsed) Drain Current, Tj limited		I_{DM}	800	mA
Power Dissipation @ T_A= 25°C	Per Device Total	P_D	350 500	mW mW
Maximum Thermal Resistance, Junction to PCB		$R_{\Theta J\text{-}PCB}$ [5/]	250	°C/W
Operating & Storage Temperature		T_{OP} & T_{STG}	-65 to +200	°C

PACKAGE OUTLINE: GULLWING (GW)



NOTE: All specifications are subject to change without notification.
SCD's for these devices should be reviewed by SSDI prior to release.

DATA SHEET #: FT0024A | **DOC**

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Electrical Characteristics 4/		Symbol	Min	Typ	Max	Units
Gate – Source Breakdown Voltage	I_G = 10 µA, V_{DS} = 0 V	BV_{DSS}	60	70	—	**Volts**
Gate to Source Threshold Voltage	V_{DS} = V_{GS} , I_D = 0.25 mA	$V_{GS(th)}$	1.0	2.0	2.5	**Volts**
Gate to Source Leakage Current	V_{GS} = +/-20 V, V_{DS} = 0 V V_{GS} = +/-10 V, V_{DS} = 0 V V_{GS} = +/-5 V, V_{DS} = 0 V V_{GS} = +/-10 V, V_{DS} = 0 V, T_A = 85ºC	I_{GSS}		0.0005	10 150 100 1000	**uA** **nA** **nA** **nA**
Zero Gate Voltage Drain Current	V_{DS} = 50 V, V_{GS} = 0 V V_{DS} = 60 V, V_{GS} = 0 V V_{DS} = 50 V, V_{GS} = 0 V, T_A = 85ºC V_{DS} = 60 V, V_{GS} = 0 V,T_A = 125ºC	I_{DSS}		0.4	10 1 100 500	**nA** **uA** **nA** **uA**
On-state Drain Current	V_{DS} = 7.5 V, V_{GS} = 10 V V_{DS} = 4.5 V, V_{GS} = 10 V V_{DS} = 25 V, V_{GS} = 10 V	$I_{D(ON)}$	800 500 -	- - 2.1		**mA** **mA** **A**
Drain – Source On-Resistance	I_D = 500 mA, V_{GS} = 10 V I_D = 200 mA, V_{GS} = 10 V I_D = 50 mA, V_{GS} = 5 V	$R_{DS(ON)}$		2.8 4.0 3.5	3.5 - -	**Ω** **Ω** **Ω**
Transconductance	I_D = 200 mA, V_{DS} = 10 V	G_{FS}	100			**mS**
Body Diode Forward Voltage	I_S = 200 mA, V_{GS} = 0 V	V_{SD}			1.3	**V**
Total Gate Charge	V_{DS} = 10 V, V_{GS} = 4.5 V, I_D= 250 mA	Q_g	-		0.6	**nC**
Input Capacitance	V_{DS} = 25 V, V_{GS} = 0 V, f = 1 MHz	C_{iss}	—	30	-	**pF**
Output Capacitance	V_{DS} = 25 V, V_{GS} = 0 V, f = 1 MHz	C_{oss}	—	6	-	**pF**
Reverse Transfer Capacitance	V_{DS} = 25 V, V_{GS} = 0 V, f = 1 MHz	C_{rss}	—	2.5	-	**pF**
Turn-on time	V_{DD} = 30 V, I_D = 200 mA, R_L = 150 Ω , R_G = 10 Ω, V_G= 10 V	t_{ON}	—	10	25	**ns**
Turn-off time		t_{OFF}	—	13	35	**ns**

NOTES:

* Pulse Test: Pulse Width = 100 µsec, Duty Cycle = 2%

1/ For Ordering Information, Price, and Availability Contact Factory.

2/ Screening per MIL-PRF-19500

3/ For Package Outlines Contact Factory.

4/ Unless Otherwise Specified, All Electrical Characteristics @25ºC

5/ Mounted on FR1 PCB

Available Part Numbers:

SFF7002KA2GW

PIN ASSIGNMENT

Package	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6
Gullwing	Drain	Gate	Source	Drain	Gate	Source