



Solid State Devices, Inc.

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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

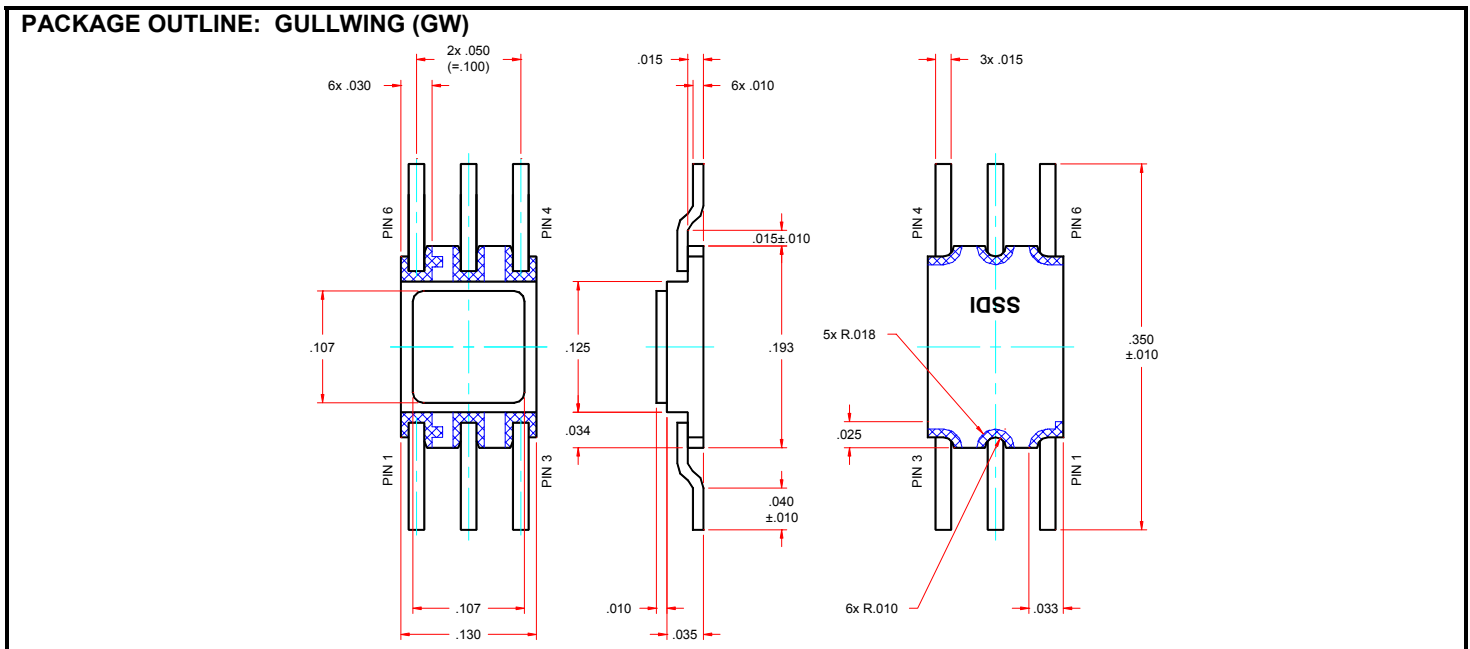
Part Number / Ordering Information^{1/}
SFF7002KA2

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, T _j limited	I _{DM}	800	mA
Power Dissipation @ T _A = 25°C	P _D	350	mW
Per Device Total		500	mW
Maximum Thermal Resistance, Junction to PCB	R _{ΘJ-PCB} ^{5/}	250	°C/W
Operating & Storage Temperature	T _{OP} & T _{STG}	-65 to +200	°C



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

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Electrical Characteristics ^{4/}		Symbol	Min	Typ	Max	Units
Gate – Source Breakdown Voltage	$I_G = 10 \mu A, V_{DS} = 0 V$	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	$V_{GS} = +/-20 V, V_{DS} = 0 V$ $V_{GS} = +/-10 V, V_{DS} = 0 V$ $V_{GS} = +/-5 V, V_{DS} = 0 V$ $V_{GS} = +/-10 V, V_{DS} = 0 V, T_A = 85^\circ C$	I_{GSS}		0.0005	10 150 100 1000	μA nA nA nA
Zero Gate Voltage Drain Current	$V_{DS} = 50 V, V_{GS} = 0 V$ $V_{DS} = 60 V, V_{GS} = 0 V$ $V_{DS} = 50 V, V_{GS} = 0 V, T_A = 85^\circ C$ $V_{DS} = 60 V, V_{GS} = 0 V, T_A = 125^\circ C$	I_{DSS}		0.4	10 1 100 500	nA μA nA μA
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	$V_{DD} = 30 V, I_D = 200 mA,$ $R_L = 150 \Omega, R_G = 10 \Omega, V_G = 10 V$	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 @25°C
- 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

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