



Features

- Low on resistance 10 ohms
- High input impedance
- Low input and output leakage
- Small package size SOT-223
- PC Card (PCMCIA) Compatible
- PCB Space and Cost Savings

Applications

- Support Component for LITELINK™ Data Access Arrangement (DAA)
- Normally-on switch
- Telecom
- Constant Current Source

Description

The CPC5602C is an “N” channel depletion mode Field Effect Transistor (FET) that utilizes Clare’s proprietary third generation vertical DMOS process. The third generation process realizes world class, high voltage MOSFET performance in an economical silicon gate process. The vertical DMOS process yields a highly reliable device particularly in difficult application environments such as telecommunications.

One of the primary applications for the CPC5602C is as a linear regulator/ hook switch for the LITELINK™ Data Access Arrangements (DAA) Devices (CPC5610A, CPC5611A, CPC5604A).

The CPC5602C has a typical on-resistance of 8Ω, a breakdown voltage exceeding 350V and is available in an SOT-223 package. As with all MOS devices, the FET structure prevents thermal runaway and thermal-induced secondary breakdown.

Absolute Maximum Ratings

Parameter	Min	Max	Units
V _{DSS} Voltage	—	350	V
Total Package Dissipation	—	2.5	W
Operational Temperature	-40	+85	°C
Storage Temperature	-40	+125	°C
Soldering Temperature	—	+220	°C

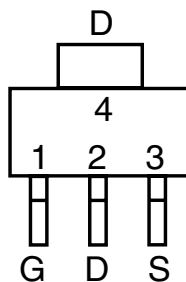
Absolute Maximum Ratings are stress ratings. Stresses in excess of these ratings can cause permanent damage to the device. Functional operation of the device at these or any other conditions beyond those indicated in the operational sections of this data sheet is not implied. Exposure of the device to the absolute maximum ratings for an extended period may degrade the device and effect its reliability.

Ordering Information

Part #	Description
CPC5602C	N-Channel Depletion Mode FET, SOT-223 Package
CPC5602CTR	N-Channel Depletion Mode, SOT-223 Package FET-TAPE and Reel (1000 units min)

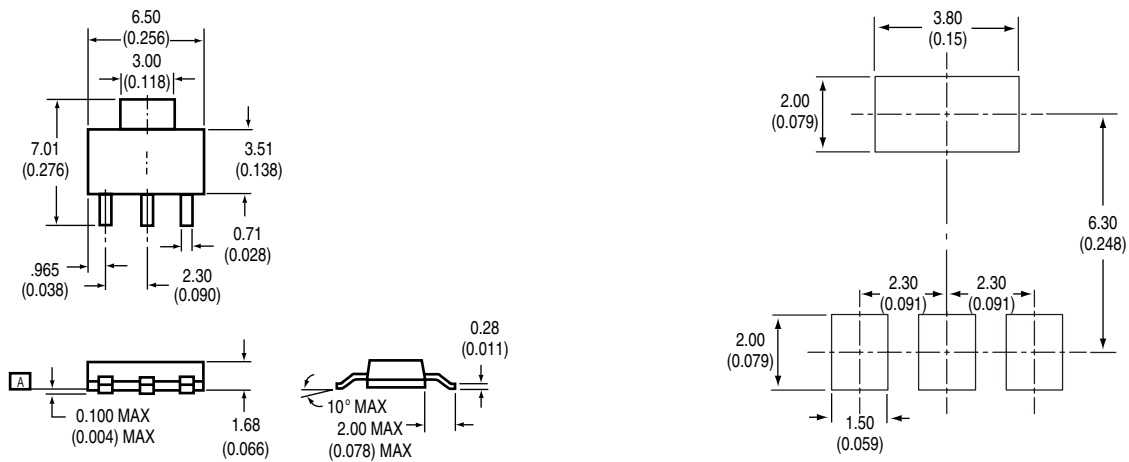
Electrical characteristics (@0 to 85°C unless otherwise specified)

PARAMETERS	SYMBOL	MIN	TYP	MAX	UNITS	CONDITIONS
Breakdown Voltage	$V_{(BR)DSS}$	350	-	--	V	$V_{GS} = -5V, I_D < 100\mu A$
Gate-to-Source Off Voltage	V_{GS1}	-3.6	-	-2	V	$I_D = 2\mu A, 10V < V_{DS} < 100V$
Drain Current 1	I_{D1}	-	-	5	mA	$V_{GS} = -2.7V, 5V < V_{DS} < 50V$
Drain Current 2	I_{D2}	130	-	-	mA	$V_{GS} = -0.57V, 5V < V_{DS} < 50V$
Continuous Drain Current 1	I_{DC1}	125	-	-	mA	$V_{DS} = 7V$
Continuous Drain Current 2	I_{DC2}	60	-	-	mA	$V_{DS} = 40V$
On Resistance	R_{DS}	-	8	10	Ω	$V_{GS} = -0.35V, 0.1V < V_{DS} < 0.2V$
Gate Leakage Current	I_{GSS}	-	-	.1	μA	$-10V < V_{GS} < 10V$
Gate Capacitance	C_{ISS}	-	-	300	pF	$V_{DS} = V_{GS} = 0V$
Thermal Resistance	θ_{JC}	-	-	14	$^{\circ}C/W$	

Package Pinout


Pin #	Name
1	GATE
2	DRAIN
3	SOURCE
4	DRAIN

Mechanical Dimensions



Coplaner to **A** 0.08/(0.003) 4 PL.

Note: Values are typical except where noted.

Dimensions
mm
(inches)



CLARE

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Worldwide Sales Offices

CLARE LOCATIONS

Clare Headquarters
78 Cherry Hill Drive
Beverly, MA 01915
Tel: 1-978-524-6700
Fax: 1-978-524-4900
Toll Free: 1-800-27-CLARE

Clare Micronix Division
145 Columbia
Aliso Viejo, CA 92656-1490
Tel: 1-949-831-4622
Fax: 1-949-831-4628

SALES OFFICES

AMERICAS

Americas Headquarters
Clare
78 Cherry Hill Drive
Beverly, MA 01915
Tel: 1-978-524-6700
Fax: 1-978-524-4900
Toll Free: 1-800-27-CLARE

Eastern Region
Clare
P.O. Box 856
Mahwah, NJ 07430
Tel: 1-201-236-0101
Fax: 1-201-236-8685
Toll Free: 1-800-27-CLARE

Central Region
Clare Canada Ltd.
3425 Harvester Road, Suite 202
Burlington, Ontario L7N 3N1
Tel: 1-905-333-9066
Fax: 1-905-333-1824

Western Region
Clare
1852 West 11th Street, #348
Tracy, CA 95376
Tel: 1-209-832-4367
Fax: 1-209-832-4732
Toll Free: 1-800-27-CLARE

Canada
Clare Canada Ltd.
3425 Harvester Road, Suite 202
Burlington, Ontario L7N 3N1
Tel: 1-905-333-9066
Fax: 1-905-333-1824

EUROPE

European Headquarters
CP Clare nv
Bampslaan 17
B-3500 Hasselt (Belgium)
Tel: 32-11-300868
Fax: 32-11-300890

France
Clare France Sales
Lead Rep
99 route de Versailles
91160 Champlan
France
Tel: 33 1 69 79 93 50
Fax: 33 1 69 79 93 59

Germany
Clare Germany Sales
ActiveComp Electronic GmbH
Mitterstrasse 12
85077 Manching
Germany
Tel: 49 8459 3214 10
Fax: 49 8459 3214 29

Italy
C.L.A.R.E.s.a.s.
Via C. Colombo 10/A
I-20066 Melzo (Milano)
Tel: 39-02-95737160
Fax: 39-02-95738829

Sweden
Clare Sales
Comptronic AB
Box 167
S-16329 Spånga
Tel: 46-862-10370
Fax: 46-862-10371

United Kingdom
Clare UK Sales
Marco Polo House
Cook Way
Bindon Road
Taunton
UK-Somerset TA2 6BG
Tel: 44-1-823 352541
Fax: 44-1-823 352797

ASIA PACIFIC

Asian Headquarters
Clare
Room N1016, Chia-Hsin, Bldg II,
10F, No. 96, Sec. 2
Chung Shan North Road
Taipei, Taiwan R.O.C.
Tel: 886-2-2523-6368
Fax: 886-2-2523-6369

<http://www.clare.com>

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