



flowDUAL E3BP SiC

2300 V / 3 mΩ

Topology features

- Temperature sensor
- Half Bridge

Component features

- Fast intrinsic diode with low reverse recovery
- High blocking voltage with low on-resistance
- High speed switching with low capacitance

Housing features

- Base isolation: Al₂O₃
- Cu baseplate
- Convex shaped baseplate for superior thermal contact
- CTI600 housing material
- Baseplate with rough surface
- Press-fit pin
- Reliable cold welding connection
- Thermo-mechanical push-and-pull force relief

Target applications

- Charging Stations
- Energy Storage Systems
- General
- Power Supply
- Solar Inverters
- UPS

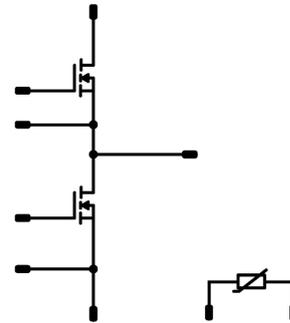
Types

- 30-EP232PB004ME01-PR09F07T

flow E3BP 12 mm housing



Schematic





Vincotech

Maximum Ratings

$T_j = 25\text{ °C}$, unless otherwise specified

Parameter	Symbol	Conditions	Value	Unit
Half-Bridge Switch				
Drain-source voltage	V_{DS}		2300	V
Drain current (DC current)	I_D	$T_j = T_{jmax}$ $T_s = 80\text{ °C}$	275	A
Peak drain current	I_{DM}	t_p limited by T_{jmax}	1328	A
Total power dissipation	P_{tot}	$T_j = T_{jmax}$ $T_s = 80\text{ °C}$	758	W
Gate-source voltage	V_{GS}	static	-4 / 15	V
		dynamic	-8 / 19	V
Maximum Junction Temperature	T_{jmax}		175	°C

Module Properties

Thermal Properties

Storage temperature	T_{stg}		-40...+125	°C
Operation temperature under switching condition	T_{jop}		-40...+($T_{jmax} - 25$)	°C

Isolation Properties

Isolation voltage	V_{isol}	DC Test Voltage $t_p = 2\text{ s}$	6800	V
Creepage distance			>12,7	mm
Clearance			>12,7	mm
Comparative Tracking Index	CTI		≥ 600	



Vincotech

Characteristic Values

Parameter	Symbol	Conditions					Values			Unit
		V_{GS} [V]	V_{GE} [V]	V_{DS} [V]	I_C [A]	T_j [°C]	Min	Typ	Max	

Half-Bridge Switch

Static

Drain-source on-state resistance	$r_{DS(on)}$		15		552	25		3,75	4,88	mΩ
Gate-source threshold voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}$			0,152	25	1,8	2,5	3,6	V
Gate to Source Leakage Current	I_{GSS}		15	0		25		80	800	nA
Zero Gate Voltage Drain Current	I_{DSS}		0	2300		25		8	80	μA
Internal gate resistance	r_g							0,75		Ω
Gate charge	Q_g		-4/15	1500	552	25		1176		nC
Short-circuit input capacitance	C_{iss}	$f = 100$ kHz	0	1500	0	25		48000		pF
Short-circuit output capacitance	C_{oss}							816		
Reverse transfer capacitance	C_{rss}							80		
Diode forward voltage	V_{SD}		0		280	25		5,5		V

Thermal

Thermal resistance junction to sink	$R_{th(j-s)}$	$\lambda_{paste} = 5,2$ W/mK (PTM)						0,13		K/W
-------------------------------------	---------------	------------------------------------	--	--	--	--	--	------	--	-----



Vincotech

Characteristic Values

Parameter	Symbol	Conditions					Values			Unit
		V_{GS} [V]	V_{GE} [V]	V_{DS} [V]	V_{CE} [V]	T_j [°C]	Min	Typ	Max	

Thermistor

Static

Rated resistance	R					25		5		kΩ
Deviation of R100	$A_{R/R}$	$R_{100} = 493 \Omega$				100	-5		5	%
Power dissipation	P							245		mW
Power dissipation constant	d					25		1,4		mW/K
B-value	$B_{(25/50)}$	Tol. $\pm 2 \%$						3375		K
B-value	$B_{(25/100)}$	Tol. $\pm 2 \%$						3437		K
Vincotech Thermistor Reference									K	



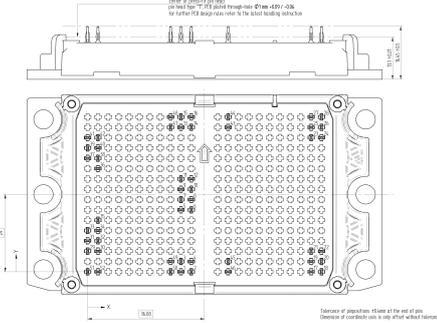
Vincotech

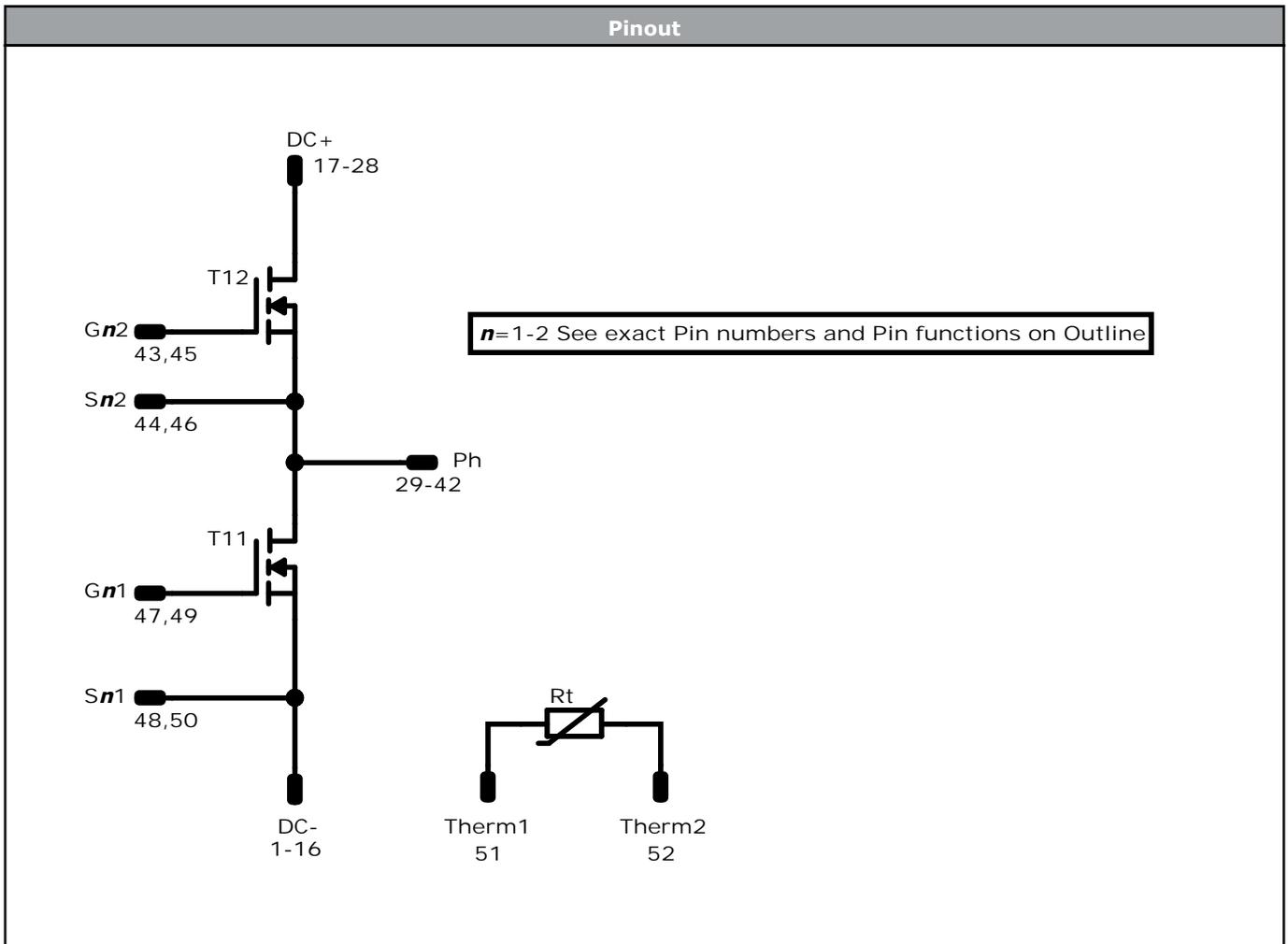
30-EP232PB004ME01-PR09F07T
target datasheet

Ordering Code	
Version	Ordering Code
Without thermal paste	30-EP232PB004ME01-PR09F07T
With thermal paste (5,2 W/mK, PTM6000HV)	30-EP232PB004ME01-PR09F07T-/7/

Marking						
	Text	Name NN-NNNNNNNNNNNNNN- TTTTTVV	Date code WWYY	UL & VIN UL VIN	Lot LLLLL	Serial SSSS
	Datamatrix	Type&Ver TTTTTTTV	Lot number LLLLL	Serial SSSS	Date code WWYY	

Outline							
Pin table [mm]							
Pin	X	Y	Function	27	68,96	48	DC+
1	28,8	0	DC-	28	72,16	48	DC+
2	32	0	DC-	29	0	6,4	Ph
3	28,8	3,2	DC-	30	3,2	6,4	Ph
4	32	3,2	DC-	31	0	9,6	Ph
5	28,8	19,2	DC-	32	3,2	9,6	Ph
6	32	19,2	DC-	33	0	12,8	Ph
7	28,8	22,4	DC-	34	3,2	12,8	Ph
8	32	22,4	DC-	35	3,2	16	Ph
9	28,8	25,6	DC-	36	3,2	32	Ph
10	32	25,6	DC-	37	0	35,2	Ph
11	28,8	28,8	DC-	38	3,2	35,2	Ph
12	32	28,8	DC-	39	0	38,4	Ph
13	28,8	44,8	DC-	40	3,2	38,4	Ph
14	32	44,8	DC-	41	0	41,6	Ph
15	28,8	48	DC-	42	3,2	41,6	Ph
16	32	48	DC-	43	43,36	44,8	G12
17	68,96	0	DC+	44	43,36	48	S12
18	72,16	0	DC+	45	43,36	3,2	G22
19	68,96	3,2	DC+	46	43,36	0	S22
20	72,16	3,2	DC+	47	25,6	44,8	G11
21	68,96	6,4	DC+	48	25,6	48	S11
22	72,16	6,4	DC+	49	25,6	3,2	G21
23	68,96	41,6	DC+	50	25,6	0	S21
24	72,16	41,6	DC+	51	0	0	Therm1
25	68,96	44,8	DC+	52	3,2	0	Therm2
26	72,16	44,8	DC+				





Identification					
ID	Component	Voltage	Current	Function	Comment
T11, T12	MOSFET	2300 V	3,75 mΩ	Half-Bridge Switch	Parallel devices with separate control. Values apply to complete device.
Rt	Thermistor			Thermistor	



Vincotech

Packaging instruction				
Standard packaging quantity (SPQ) 24	>SPQ	Standard	<SPQ	Sample

Handling instruction
Handling instructions for <i>flow</i> E3BP packages see vincotech.com website.

Package data
Package data for <i>flow</i> E3BP packages see vincotech.com website.

Vincotech thermistor reference
See Vincotech thermistor reference table at vincotech.com website.

UL recognition and file number
This device is UL 1557 recognized under E192116 up to a junction temperature under switching condition $T_{j,op}=175^{\circ}\text{C}$ and up to 4000VAC/1min isolation voltage. For more information see vincotech.com website.



Document No.:	Date:	Modification:	Pages
30-EP232PB004ME01-PR09F07T-T3-14	9 Feb. 2026	Change Half-Bridge Switch	

Product status definition		
Datasheet Status	Product Status	Definition
Target	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice. The data contained is exclusively intended for technically trained staff.

DISCLAIMER

The information, specifications, procedures, methods and recommendations herein (together "information") are presented by Vincotech to reader in good faith, are believed to be accurate and reliable, but may well be incomplete and/or not applicable to all conditions or situations that may exist or occur. Vincotech reserves the right to make any changes without further notice to any products to improve reliability, function or design. No representation, guarantee or warranty is made to reader as to the accuracy, reliability or completeness of said information or that the application or use of any of the same will avoid hazards, accidents, losses, damages or injury of any kind to persons or property or that the same will not infringe third parties rights or give desired results. It is reader's sole responsibility to test and determine the suitability of the information and the product for reader's intended use.

LIFE SUPPORT POLICY

Vincotech products are not authorised for use as critical components in life support devices or systems without the express written approval of Vincotech.

As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, or (c) whose failure to perform when properly used in accordance with instructions for use provided in labelling can be reasonably expected to result in significant injury to the user.
2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.