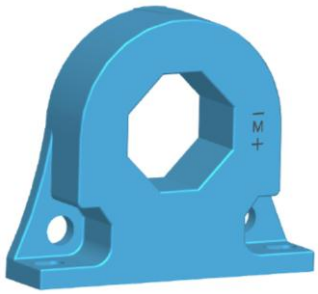
BSF2-300ICV6M

Current Sensors

Description

For the electronic measurement of currents: DC, AC, pulsed, mixed, with a galvanic isolation between the primary circuit (high power) and the secondary circuit (electronic circuit).



I_{PN} = 300A

I_{SN} = 150mA

Features

- Closed loop (compensated)current Transducer using the Hall effect
- Galvanic isolation between primary and secondary circuit
- Low power consumption
- Extended measuring range
- Insulated plastic case recognized according to UL 94-V0

Advantages

- Very good linearity
- Excellent accuracy
- Low temperature drift
- Wide frequency bandwidth
- Optimized response time
- No insertion losses
- High immunity against external Interference
- Excellent performance and price

Industrial applications

- AC variable speed drives
- Battery supplied applications
- Uninterruptible Power Supplies (UPS)
- Power supplies for welding applications
- Static converters for DC motor drives
- Switched-Mode Power Supplies (SMPS)

TYPES OF PRODUCTS

Type	Primary nominal current r. m. s I_{PN} (A)	Primary current measuring range I_P (A)	Measuring resistance@70℃ R_M (Ω)	
BSF2-300ICV6M	300	0 ... ±500	0～37	with ±12V@±300Amax
			0～8	with ±12V@±500Amax
			10～56	with ±15V@±300Amax
			10～20	with ±15V@±500Amax

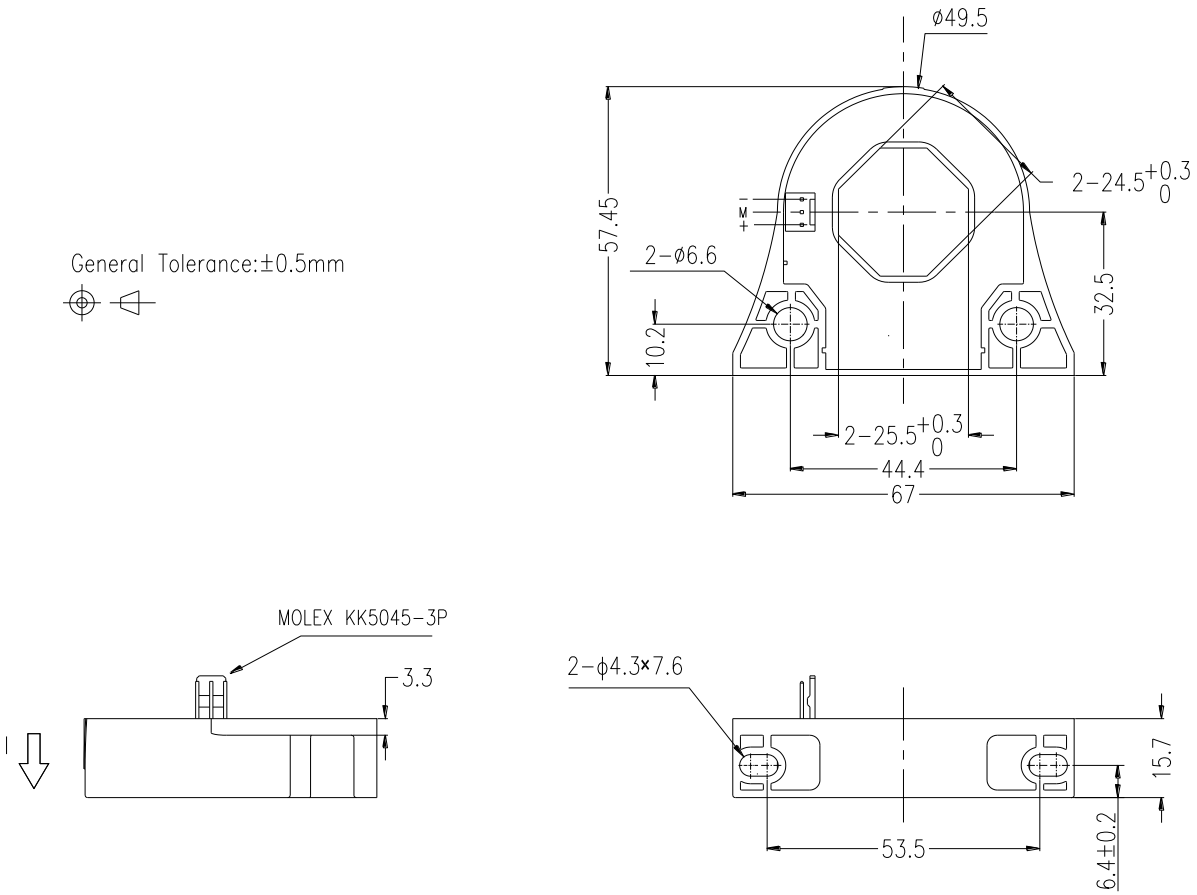
Parameters Table

PARAMETERS	SYMBOL	UNIT	VALUE	CONDITIONS
Electrical data				
Supply voltage(±5%)	V_C	V	±12…15	
Current consumption	I_C	mA	20+Is	@±15V
Secondary nominal r.m.s current	I_{SN}	mA	150	
Conversion ratio	K_N		1:2000	
Accuracy - Dynamic performance data				
Linearity	ε_L	%	<±0.1	
Accuracy	X_G	%	<±0.4	@I_{PN}, T_A = 25℃
Offset current	I_O	mA	<±0.20	@I_P = 0,T_A = 25℃
Thermal drift of Io	I_{OT}	mA	<±0.64	@I_P = 0,—25℃~+70℃
Magnetic offset current	I_{OM}	mA	<±0.08	@I_P = 0,after an overload of 3× I_{PN}
Reaction time	t_{ra}	nS	<500	@10% of I_{Pmax}
Response time	t_r	μS	<1	@90% of I_{PN} step
d_i/d_t accurately followed	d_i/d_t	A/μS	>100	
Frequency bandwidth (1)	BW	kHz	DC~100	@-3dB
General data				
Ambient operating temperature	T_A	℃	-25 ~ +70	
Ambient storage temperature	T_S	℃	-40 ~ +90	
Secondary coil resistance	Rs	Ω	34	@ T_A = 70℃
Mass	m	g	60	
Isolation data				
R. m. s voltage for AC isolation test	V_d	KV	6	@50Hz, 1 min
Impulse withstand voltage	V_W	KV	>7.3	@1.2/50μS
Creepage distance	dCp	mm	>8	
Clearance distance	dCI	mm	>7.15	
Comparative Tracking Index	CTI		>175	

Notes:

(1) Please refer to derating curves in the technical file to avoid excessive core heating at high frequency

Dimensions BSF2-300ICV6M (in mm. 1 mm = 0.0394 inch)



◆Instructions of use

1. When the test current passes through the sensor, you can get the size of the output current. (Warning: wrong connection may lead to sensors damage.)
2. Based on user needs, the sensors output range can be appropriately regulated.
3. According to user needs, different rated input currents and output currents of the sensors can be customized.

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