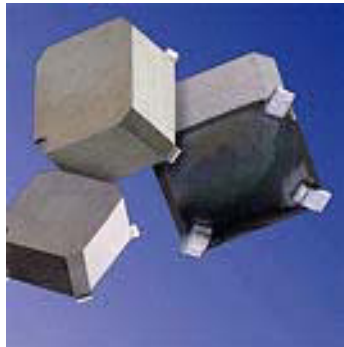




SMCT Surface Mount Current Transformers



Benefits & Features

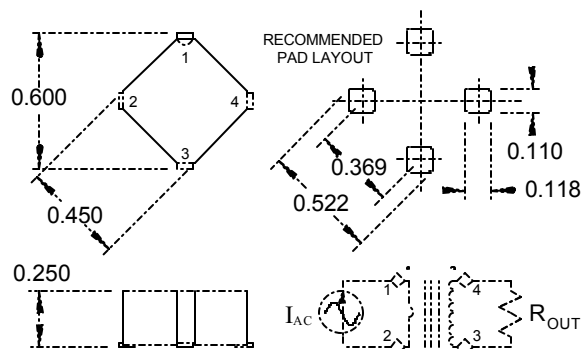
- 8 Amp continuous current rating
- Wide bandwidth (<10 KHz to > 3 MHz)
- Output isolated to 1500 VAC
- Provides easily customized I/V conversion
- Ultra-rugged low profile package
- Internal sense winding for easy installation
- 3 off-the-shelf turns ratio standards (1:25, 1:50, and 1:100)

Part Number Selection Table					
Parameter	Conditions	Units	SMCT 25	SMCT 50	SMCT100
Sense DC Resistance		mΩ	2.8	2.8	2.8
Output DC Resistance		Ω	0.11	0.42	1.7
Sense Magnetizing Inductance	f=100 KHz; I=100 mA; Output open	μH	2.5	2.5	2.5
Sense Leakage Inductance	f=100 KHz; I=100 mA; Output shorted	nH	9	9	9
Sense-to-Output Capacitance	F=100 KHz; V= 1000mV	pF	4	4	4

Typical DC and AC Characteristics (T_A = 25°C)

Absolute Maximum Ratings (all models)		
Parameter	Limit(s)	Units
Continuous Sense Current (T _A =25°C)	8	A _{RMS}
Output Voltage (peak)	50	V
Total Power Dissipation*	1.4	W
Operating Temperature Range	-40 to +130	°C
Storage Temperature Range	-40 to +130	°C

*Derate at 13.3 mW/°C above 25°C



Hi-Rel System's SMCT series provides the designer with high frequency current stepdown and current-to-voltage (I/V) conversion functions on surface mount assemblies. Customized I/V conversion ratios are easily implemented using a single external calibration resistor. Their high dielectric withstanding rating allows the sensing of currents on high-voltage lines, while their low inter-winding capacitance keeps cross-talk to a minimum. Internal sense windings allow for fully automated pick-and-place mounting, avoiding the need for time consuming hand wiring operations.

Specifications subject to change without notice.

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11100 Wayzata Boulevard
Suite 501
Minnetonka, MN 55305
Phone: 952-544-1344
Fax: 952-544-1345

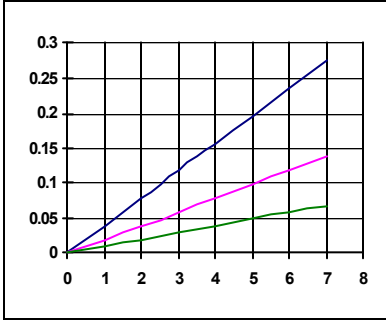
Date code 0229



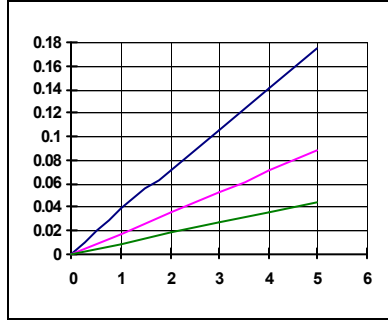
SMCT Surface Mount Current Transformers

SMCT 25 SMCT 50 SMCT 100

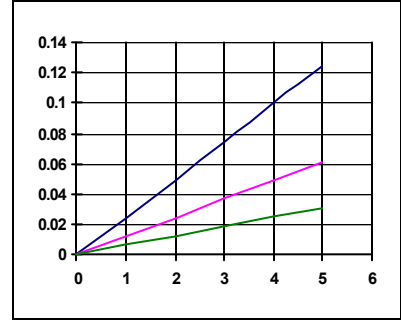
Output Voltage vs. Sense Current
($R_{OUT} = 1 \Omega$ at 10 KHz)



Output Voltage vs. Sense Current
($R_{OUT} = 1 \Omega$ at 100 KHz)



Output Voltage vs. Sense Current
($R_{OUT} = 1 \Omega$ at 300 KHz)



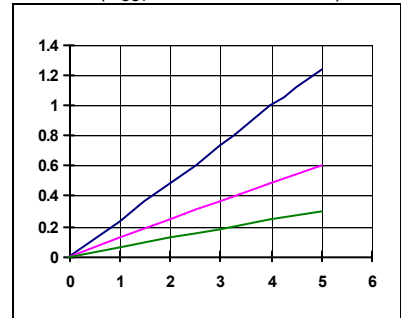
Output Voltage vs. Sense Current
($R_{OUT} = 10 \Omega$ at 10 KHz)



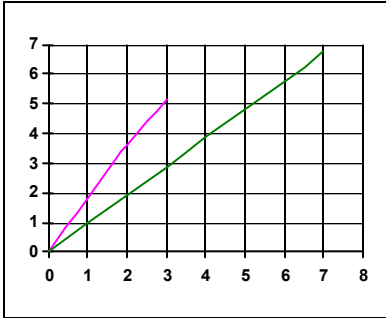
Output Voltage vs. Sense Current
($R_{OUT} = 10 \Omega$ at 100 KHz)



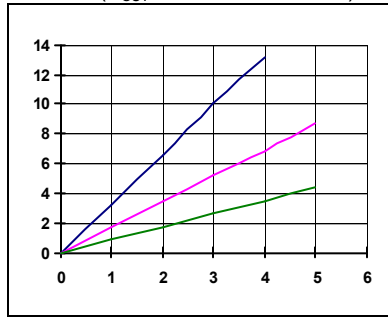
Output Voltage vs. Sense Current
($R_{OUT} = 10 \Omega$ at 300 KHz)



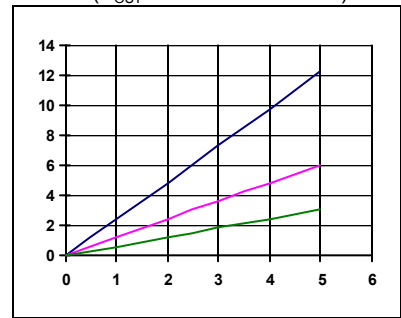
Output Voltage vs. Sense Current
($R_{OUT} = 100 \Omega$ at 10 KHz)



Output Voltage vs. Sense Current
($R_{OUT} = 100 \Omega$ at 100 KHz)

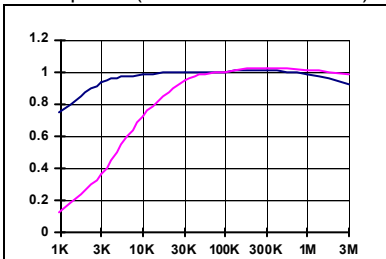


Output Voltage vs. Sense Current
($R_{OUT} = 100 \Omega$ at 300 KHz)

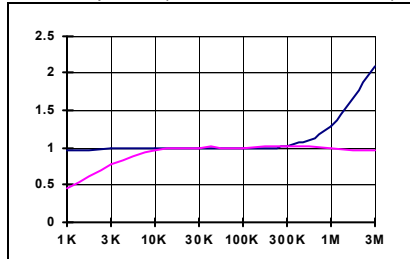


$R_{OUT} = 10 \Omega$ $R_{OUT} = 100 \Omega$

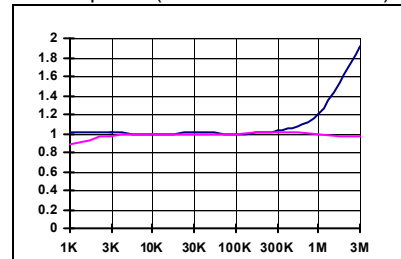
SMCT 25 Small-signal Frequency Response (Normalized to 100 KHz)



SMCT 50 Small-signal Frequency Response (Normalized to 100 KHz)



SMCT 100 Small-signal Frequency Response (Normalized to 100 KHz)



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