



## Specifications

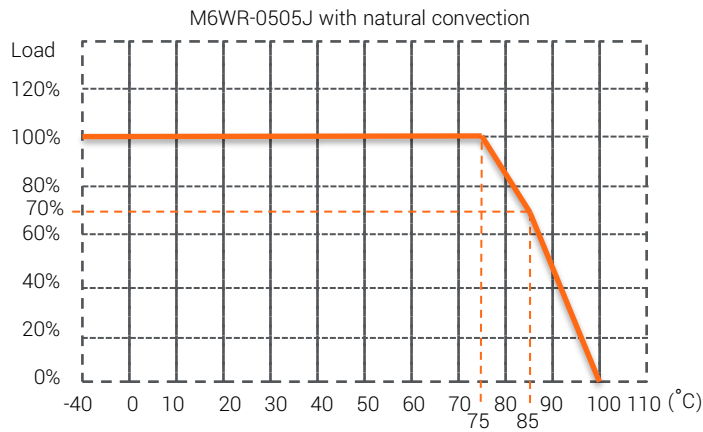
	Parameter	Conditions	Min.	Typ.	Max.	Unit	
	Input filter			Capacitor type			
	Input voltage range			2:1			
	Input current at no load	05Vin (nom)			105	mA	
		12Vin (nom)			55	mA	
		24Vin (nom)			28	mA	
		48Vin (nom)			14	mA	
Input		5V DC/DC ON		4.5		VDC	
		5V DC/DC OFF		2.7		VDC	
	Under voltage lockout	12V DC/DC ON		9		VDC	
		12V DC/DC OFF		7		VDC	
		24V DC/DC ON		18		VDC	
		24V DC/DC OFF		15		VDC	
		48V DC/DC ON		36		VDC	
		48V DC/DC OFF		30		VDC	
Start-up times	At nominal Vin, full load		2		ms		
Remote / OFF	DC-DC ON			Open			
	DC-DC OFF			5V ≤ Vr < 10V			
Output	Voltage accuracy	100% load& nominal Vin	-1		+1	%	
	Voltage adjustability	For single output	-8		+10	%	
	Minimum load				0	%	
	Line regulation	LL to HL at 100% load	-0.2		+0.2	%	
	Load regulation	0% to 100% load	-1		+1	%	
	Cross regulation	25% to 100% load	-5		+5	%	
	Ripple& noise	@20 MHz BW (at Nominal Vin)			50	75	mVp-p
Environment	Operating temperature	With derating	-40		100	°C	
	Storage temperature		-55		125	°C	
	Case temperature			105		°C	
	Relative humidity		5		95	%RH	
Function	Isolation voltage	60sec., Input to output	1.6			KVDC	
		1sec., Input to output	2			KVDC	
	Isolation capacitance				110	pF	
	Isolation resistance		1			GΩ	
	Operating frequency	0% to 100% load	200			KHz	
	Short Circuit Protection				Continuous, automatic recovery		
	Over load protection				150	%	
	Transient response	25% load step change			500	uS	
	Temperature coefficient			-0.02		+0.02	%/°C
	MTBF (MIL-HDBK-217F)	25°C		1.776x10 <sup>6</sup>			hours
	Vibration				MIL-STD-202G		
	Safety approvals				Meet EN62368-1/EN60950-1/EN60601		
Physical	Dimension	(L x W x H)		21.8x11.1x9.2 mm			
	Weight			4.8		g	
	Case material			Non-conductive plastic (UL94V-0)			
EMC	EMI	EN55022		Class A/B			
	ESD	EN61000-4-2, Air ±8kV; Contact ±6kV		Criteria A			
	Radiated immunity	EN61000-4-3, 10V/m		Criteria A			
	Fast transient	EN61000-4-4, ±2kV		Criteria A			
	Surge	EN61000-4-5, ±1kV		Criteria A			
	Conducted immunity	EN61000-4-6, 10 Vr.m.s		Criteria A			

1. All specifications valid at nominal input voltage, full load and 25°C after warm-up time unless otherwise stated.
2. The product information and specifications are subject to change without prior notice.

CTC is the professional and one among world's leading manufacturers of DC-DC/ AC-DC converters.

The products were used in Computers, Industrial controls, Medical equipment, Transportation, EV, ECO-power, Aero-space application and communication.

## Derating Curve



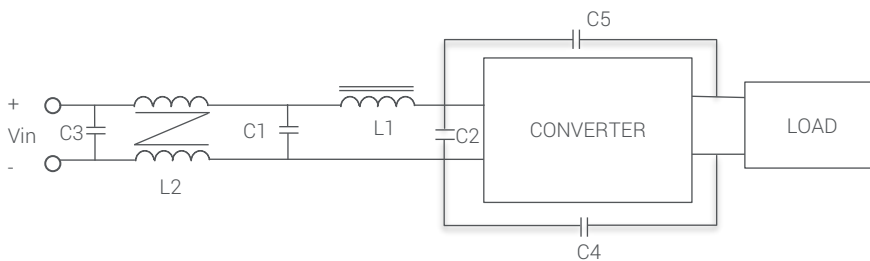
\*Special operating temperature application, please contact our sales.

## EMI suggestion for EN55022 class A/B



### EN55022 Class A

	C1	L1 Differential Mode Choke
M6WR-05XXJ	22.0uF	1.0uH
M6WR-12XXJ	4.7uF	2.2uH
M6WR-24XXJ	4.7uF	6.8uH
M6WR-48XXJ	4.4uF	22.0uH



### EN55022 Class B

	C1	C2	C3	C4	C5	L1	L2
M6WR-05XXJ	10.0uF	10.0uF	22.0uF	100.0pF	47.0pF	1.0uH	200.0uH
M6WR-12XXJ	10.0uF	14.7uF	10.0uF	100.0pF	47.0pF	6.8uH	200.0uH
M6WR-24XXJ	4.7uF	4.7uH	4.7uF	220.0pF	33.0pF	10.0uH	200.0uH
M6WR-48XXJ	4.7uF	1.0uF	4.4uF	680.0pF	47.0pF	22.0uH	600.0uH

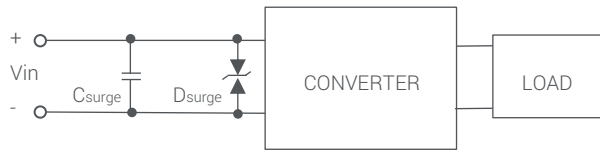
L1: Different Mode Choke

L2: Common Mode Choke

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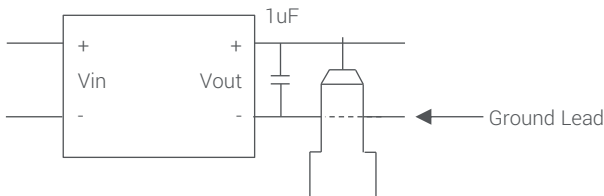
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## Surge Suggestion Circuit

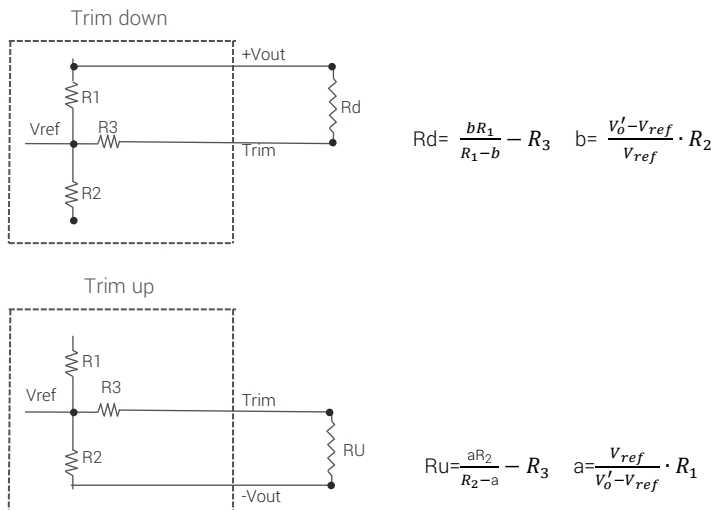


	Csurge	Dsurge
M6WR-05XXJ	E-Cap (100V, 220uF)	TVS (P4SMAJ15CA)
M6WR-12XXJ	E-Cap (100V, 220uF)	-
M6WR-24XXJ	E-Cap (100V, 220uF)	-
M6WR-48XXJ	E-Cap (100V, 220uF)	-

## Ripple & Noise Measure Method



## External Output Voltage Trimming

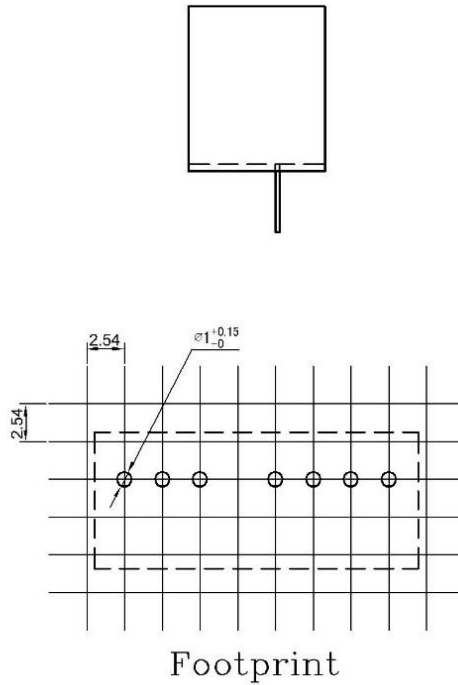
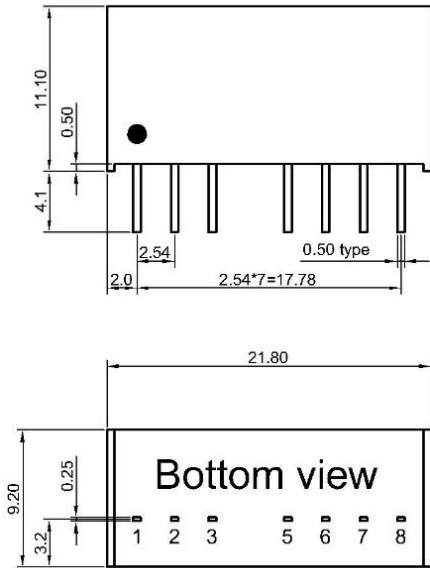


Model	M6WR-xx3.3J	M6WR-xx05J	M6WR-xx12J	M6WR-xx15J
R1	16.74 kΩ	10 kΩ	38 kΩ	50 kΩ
R2	10 kΩ	10 kΩ	10 kΩ	10 kΩ
R3	52.3 kΩ	39 kΩ	68 kΩ	68 kΩ
Vref	1.24 V	2.5 V	2.5 V	2.5 V

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## Mechanical Dimension & Pinning



Pin	Single	Dual
1	-Vin	-Vin
2	+Vin	+Vin
3	Remote ON/OFF	
5	Trim	NC
6	+Vout	+Vout
7	-Vout	Common
8	NC	-Vout

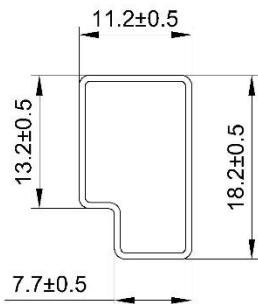
NC= No Connection

Unit: mm

Tolerance: XX.X ±0.5mm

XX.XX ±0.25mm

## Package



UNIT:mm

1 Tube = 22 pcs

Length:520±2mm