



## ODM20-SC

## 20W DC/DC



### Features

- Single Output
- Efficiency 86%~ 90%
- Wide operating temperature from -40°C to +85°C
- No minimum load required
- Medical safety, Meets 2xMOPP per 3rd EN60601-1
- Available Inputs Voltage (nominal)
- EMI class A without external circuit
- Test with E-CAP 220 $\mu$ F/100V at input terminal
- 12VDC Nom (DC 9~18V)
- 24VDC Nom (DC 18 ~ 36V)
- 48VDC Nom (DC 36 ~ 75V)
- 2:1 Wide input range VDC; package material
- 2 Years Warranty



MODEL/CHANNEL		Unit	ODM20-05SC12	ODM20-12SC12	ODM20-15SC12	ODM20-24SC12
OUTPUT	Nominal Voltage	V	5	12	15	24
	Current	A	4	1.67	1.333	.84
	Ripple & Noise(pk-pk)	mVp-p	60	60	60	120
	Capacitive Load	mV	6800	1200	800	300
	Efficiency	%	86	89	88	89
MODEL/CHANNEL		Unit	ODM20-05SC24	ODM20-12SC24	ODM20-15SC24	ODM20-24SC24
OUTPUT	Nominal Voltage	V	5	12	15	24
	Current	A	4	1.67	1.333	.84
	Ripple & Noise(pk-pk)	mVp-p	60	60	60	120
	Capacitive Load	mV	6800	1200	800	300
	Efficiency	%	87	89	88	90
MODEL/CHANNEL		Unit	ODM20-05SC48	ODM20-12SC48	ODM20-15SC48	ODM20-24SC48
OUTPUT	Nominal Voltage	V	5	12	15	24
	Current	A	4	1.67	1.333	.84
	Ripple & Noise(pk-pk)	mVp-p	60	60	60	120
	Capacitive Load	mV	6800	1200	800	300
	Efficiency	%	87	89	88	90
	Operating Frequency	kHz	300			
	Line Regulations	mV	+/-0.5			
	Load Regulations	mV	+/-0.5			
	Total Power	W	20			
	Voltage Accuracy	%	+/-1			
	Leakage Current	$\mu$ A	5			
	Transient Res. Recovery Time	$\mu$ s	500			





## ODM20

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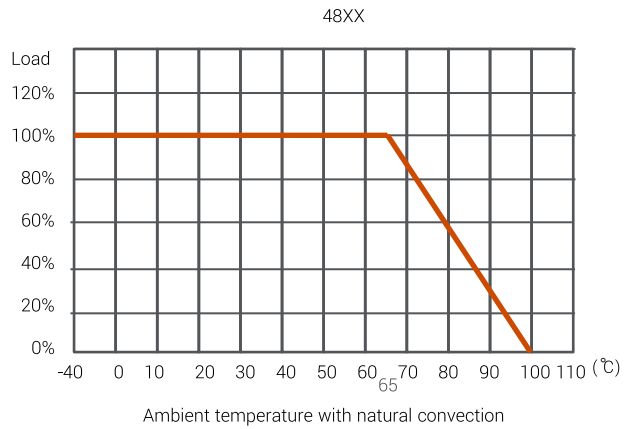
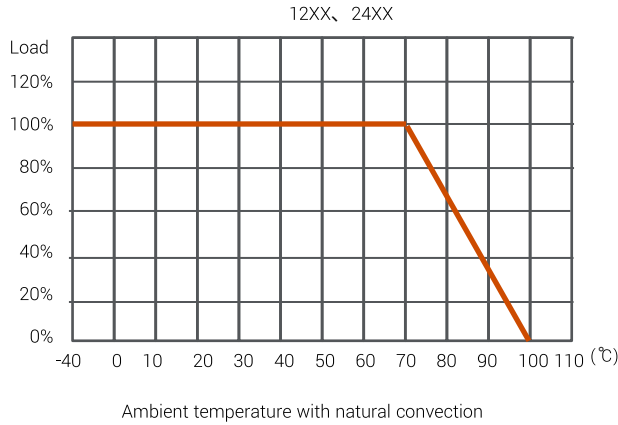
MODEL/CHANNEL		Unit	ODM20-SC12	ODM20-SC24	ODM20-SC48
<b>INPUT</b>	Voltage, Frequency	V	(9~18) 10	(18~36) 7	(36~75) 5
	Start Up Time	mS	Nom. Vin at 100% load Typ. 25ms		
	Voltage Lockout 12 VDC 24VDC 48VDC	VDC	Typ. 7.5VDC Typ. 15VDC Typ. 33VDC		
	Voltage Surge 12 VDC 24VDC 48VDC	VDC	Max. 25VDC Max. 50VDC Max. 100VDC		
<b>Function</b>	Isolation Voltage	Vac	Min. 5000VAC rms		
	Isolation Capacitance	pf	100KHZ, 1V Typ. 100pF		
	Isolation Resistance	-	Min. 10GΩ		
	Overload Protection	-	HICCUP MODE Typ. 150%		
<b>Environment</b>	Cooling Method	-	Convection		
	Operating temp. & Humidity	-	-40 ~ +100°C		
	Storage temp. & Humidity	-	-55 ~ +105°C		
	MTBF	-	25°C MIN. 1016 KHrs		
	Safety/Emission	-	EN61000-4-2, Air±15Kv; Contact±8kV Perf. Criteria A EN61000-4-3, 10V/m Criteria A EN61000-4-4, ±2kV Criteria A	EN61000-4-5, ±1kV Criteria A EN55011 Class A EN61000-4-6, 10Vr.m.s Criteria A	
<b>Dimension</b>	Size(LxWxH) /Weight	mm/g	50.8x25.4x12/30		
	Case Material Potting Material	-	PLASTIC MATERIAL		



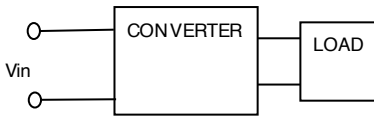


- EMI class A without external circuit
- Test with E-CAP 220 $\mu$ F/100V at input terminal

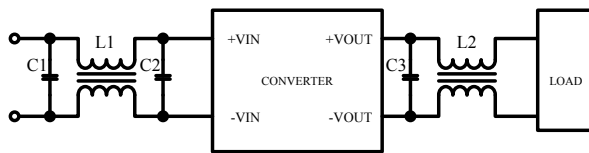
## Derating Curve



## Filtering



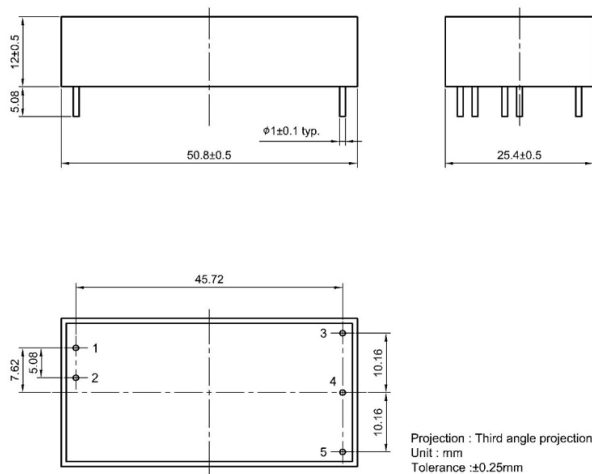
\*The external filter for EN55022 Class A.



### Class B

C1	MLCC X7R 10UF
C2	MLCC X7R 10UF
C3	MLCC X7R 4.7UF
L1	Mn-Zn $\mu$ i=7000 C.M. choke (separated) 2mH
L2	Ni-Zn $\mu$ i=500 C.M. choke (parallel) 30uH

## Design Diagram

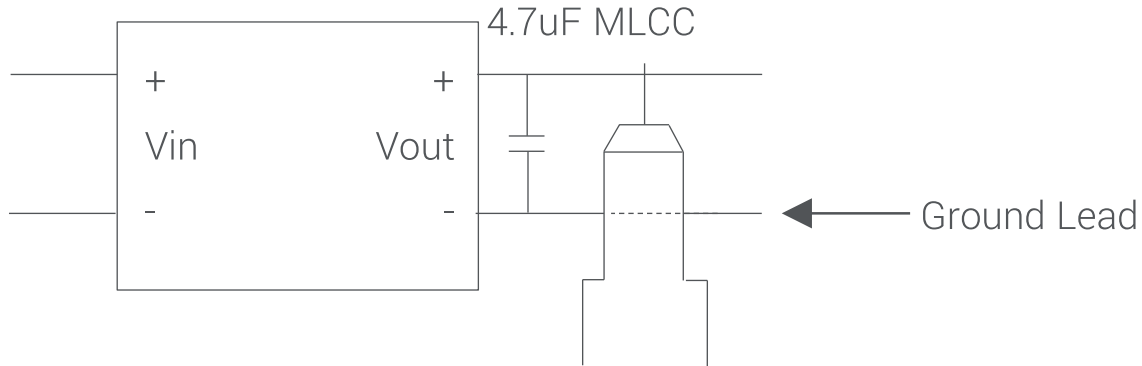


Pin	Function
1	+Vin
2	-Vin
3	+Vout
4	No Pin
5	-Vout

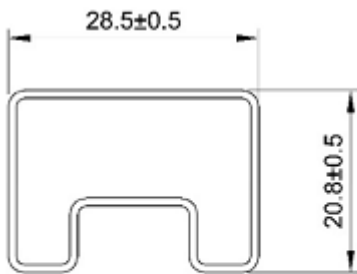




## Ripple and Noise



## Packaging



UNIT:mm  
1 Tube = 8 pcs  
Length:260±2mm

PACKAGING Parts packaged in tubes of (8)

