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 220µF/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

RoHS

	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	µA	5			
	Transient Res. Recovery Time	µs	500			

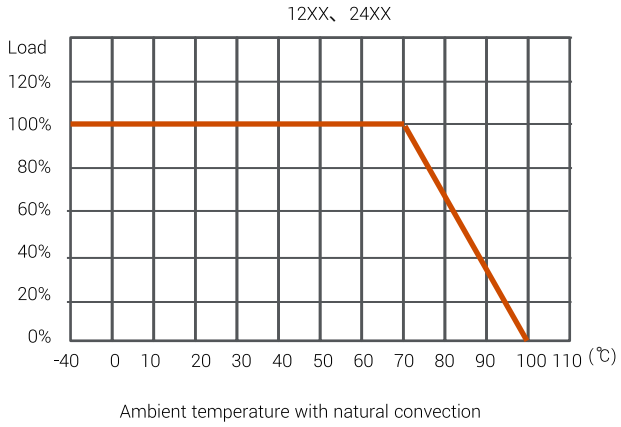
ODM20 20W DC/DC

	MODEL/CHANNEL		Unit	ODM20-SC12	ODM20-SC24	ODM20-SC48
INPUT	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		
Function	Isolation Voltage		Vac	Min. 5000VAC rms		
	Isolation Capacitance		pf	100KHZ, 1V Typ. 100pF		
	Isolation Resistance		-	Min. 10GΩ		
	Overload Protection		-	HICCUP MODE Typ. 150%		
Environment	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
Dimension	Size(LxWxH) /Weight		mm/g	50.8x25.4x12/30		
	Case Material Potting Material		-	PLASTIC MATERIAL		

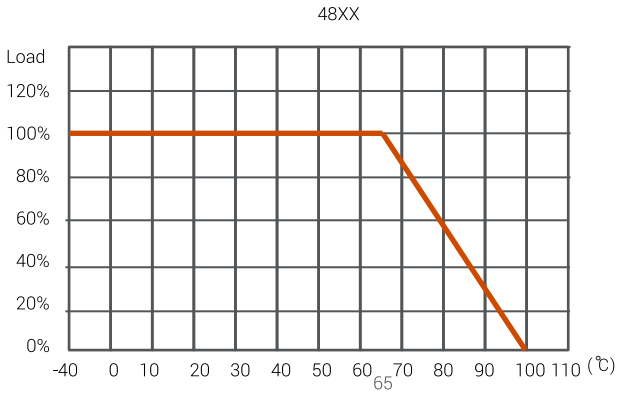
16170 Vineyard Blvd. Suite 180 Morgan Hill, CA 95037 http://www.eta-usa.com
Toll-free (US only): 800-ETA-POWR (800-382-7697) Telephone: 408 778-2793 FAX: 408-779-2753

- EMI class A without external circuit
- Test with E-CAP 220μF/100V at input terminal

Derating Curve



Ambient temperature with natural convection



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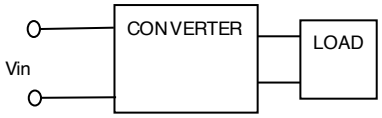
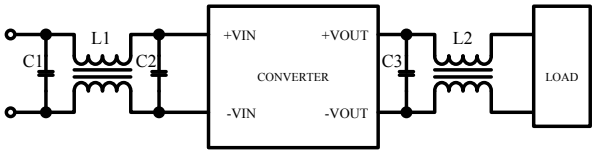
Ambient temperature with natural convection

Filtering

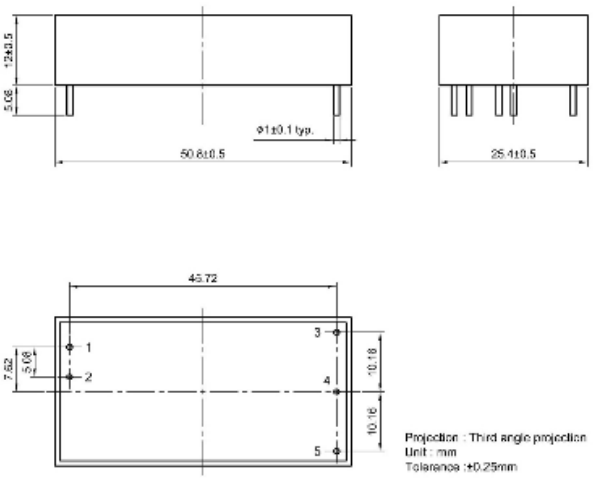


*The external filter for EN55022 Class A.



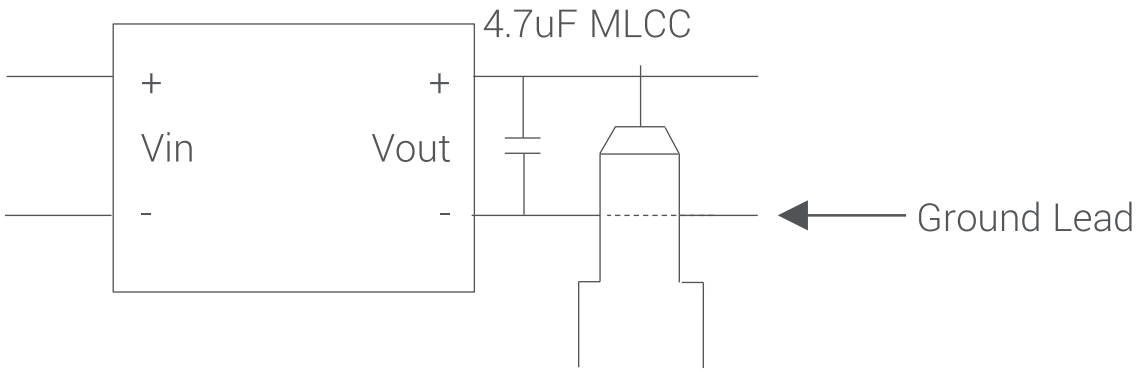
	Class B
C1	MLCC X7R 10UF
C2	MLCC X7R 10UF
C3	MLCC X7R 4.7UF
L1	Mn-Zn ui=7000 C.M. choke (separated) 2mH
L2	Ni-Zn ui=500 C.M. choke (parallel) 30uH

Design Diagram

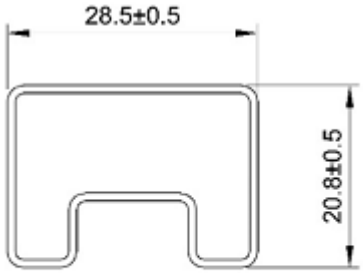


Pin	Function
1	+Vin
2	-Vin
3	+Vout
4	No Pin
5	-Vout

Ripple and Noise



Packaging



UNIT:mm
1 Tube = 8 pcs
Length:260±2mm

PACKAGING Parts packaged in tubes of (8)