

- Isolation Voltage: 1500 VDC
- High Efficiency: 88%
- Continuous Short-circuit Protection
- SIP Package
- RoHS Compliant



Option Table

Model	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA) (Max./Min.)	Full Load Eff. (Min., Typ.) %	Max. Capacitive Load (μF)
KM1-03S03	3.3 (2.97-3.63)	3.3	303/30	75/80	2400
KM1-03S05		5	200/20	80/83	2400
KM1-03S09		9	111/12	81/84	1000
KM1-03S12		12	84/9	82/85	560
KM1-03S15		15	67/7	79/85	560
KM1-03S24		24	42/4	81/86	220
KM1-05S03	5 (4.5-5.5)	3.3	303/30	70/75	2400
KM1-05S05		5	200/20	78/84	2400
KM1-05S09		9	111/12	79/85	1000
KM1-05S12		12	84/9	79/85	560
KM1-05S15		15	67/7	79/85	560
KM1-05S24		24	42/4	81/86	220
KM1-12S03	12 (10.8-13.2)	3.3	303/30	81/84	2400
KM1-12S05		5	200/20	82/86	2400
KM1-12S09		9	111/12	84/87	1000
KM1-12S12		12	84/9	84/87	560
KM1-12S15		15	67/7	86/88	560
KM1-12S24		24	42/4	86/89	220
KM1-15S03	15 (13.5-16.5)	3.3	303/30	81/84	2400
KM1-15S05		5	200/20	82/86	2400
KM1-15S09		9	111/12	84/87	1000
KM1-15S12		12	84/9	84/87	560
KM1-15S15		15	67/7	86/88	560
KM1-15S24		24	42/4	86/89	220
KM1-24S03	24 (21.6-26.4)	3.3	303/30	82/84	2400
KM1-24S05		5	200/20	85/87	2400
KM1-24S09		9	111/12	85/88	1000
KM1-24S12		12	84/9	85/88	560
KM1-24S15		15	67/7	85/88	560
KM1-24S24		24	42/4	86/89	220

Input Characteristics

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Input Current (Full Load/No Load)	3.3VDC Input	--	270/5	--/15	mA
	5VDC Input	--	270/5	--/15	
	12VDC Input	--	241/12	--/15	
	24VDC Input	--	241/18	--/15	
Reflected Ripple Current		--	15	--	mA
Input Surge Voltage	3.3VDC Input	-0.7	--	5	VDC
	5VDC Input	-0.7	--	9	
	12VDC Input	-0.7	--	18	
	24VDC Input	-0.7	--	30	
Type of input filter	Capacitor filtering				
Hot plug	Not supported				

Output Characteristic

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Output Voltage Accuracy	See envelope curve diagram				
Line Regulation	Input Voltage Variation $\pm 1\%$	--	± 1.2	± 1.5	%
Load Regulation Rate	10%~100% Load	--	10	15	%
Ripple Noise	20MHz Bandwidth	--	50	100	mVp-p
Temp. Drift Coeff.	Full load	--	± 0.03	--	%/°C
Short-Circuit Protection	Continuous, self-recovering				

Common Features

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Isolation Voltage	Input to Output, Test Time: 1 min, Leakage Current < 1mA	1500	--	--	VDC
Insulation Resistance	Input to Output, Insulation Voltage 500VDC	1000	--	--	MΩ
Isolation Capacitance	Input-Output, 100KHz/0.1V	--	20	--	pF
Working Temperature	Temperature is Reduced to 85°C (See Figure 2)	-40	--	105	°C
Storage Temperature		-55	--	105	
Storage Humidity	Non-condensation	--	--	95	%RH
Pin Soldering Temperature	Soldering point 1.5 mm from housing, soldering time ≤ 10 s	--	--	300	°C
Switching Frequency	Nominal input, full load	--	220	--	kHz
MTBF	MIL-HDBK-217F@25°C	3500	--	--	kHours

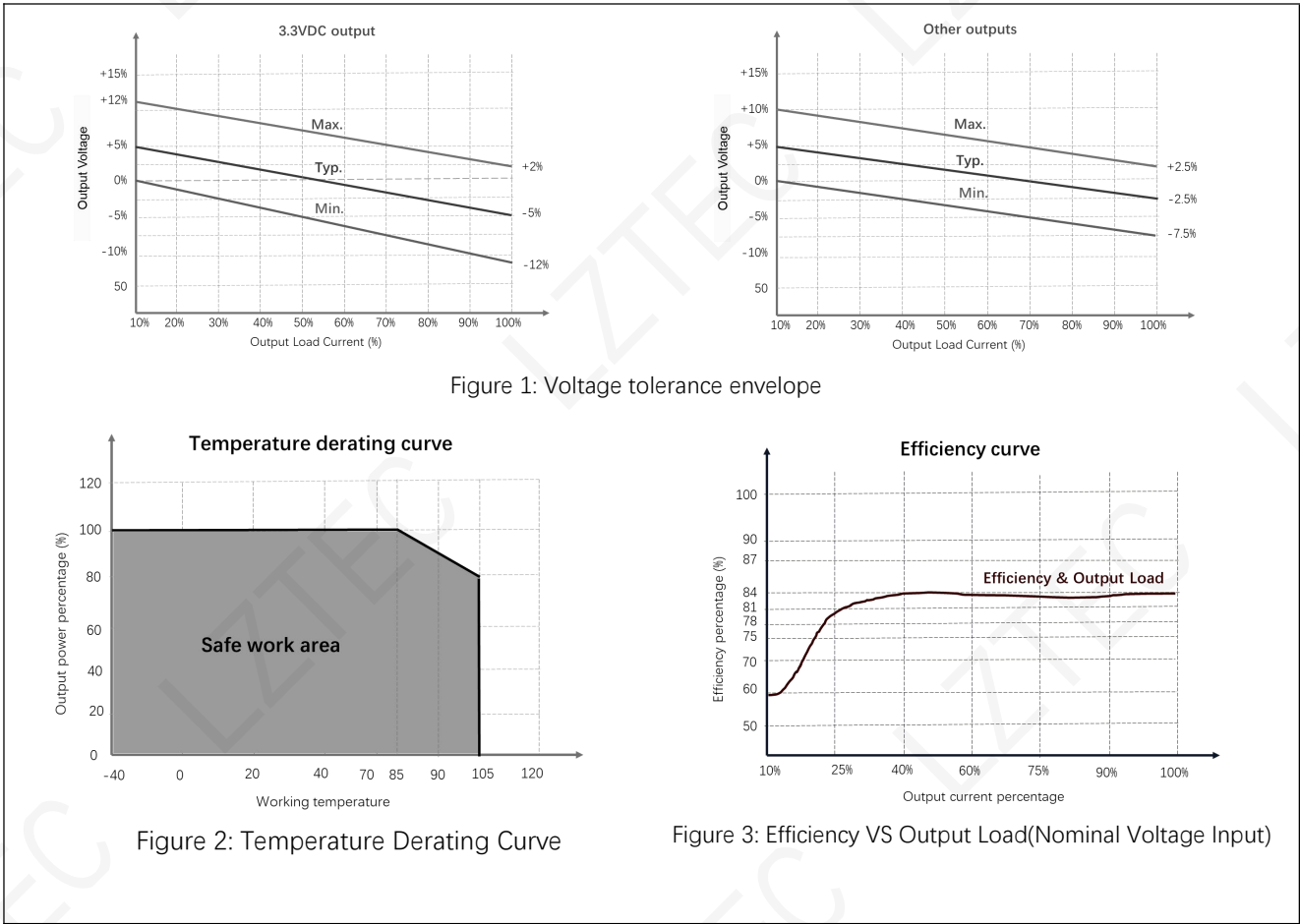
Physical Characteristics

Housing Material	Black flame-retardant heat-resistant plastic (UL94 V-0)	
Overall Dimensions	11.60 x 6.00 x 10.16mm	
Weight	1.3g	
Cooling Method	Natural Convection	

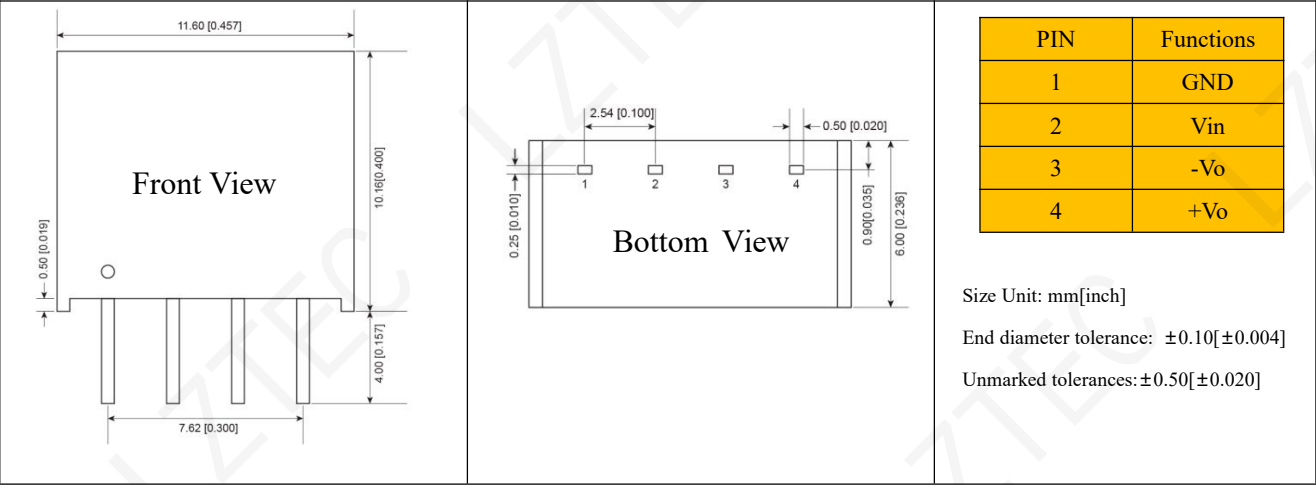
EMC characteristic

EMI	Conducted Emission	CISPR32/EN55032 CLASS B (See Figure 5)
	Radiated Emission	CISPR32/EN55032 CLASS B (See Figure 5)
EMS	ESD	IEC/EN61000-4-2 Contact ± 8 KV Performance Criteria B

Product Feature Curve Diagram



External Dimensions / Recommended Printing Layout



Circuit Design & Applications

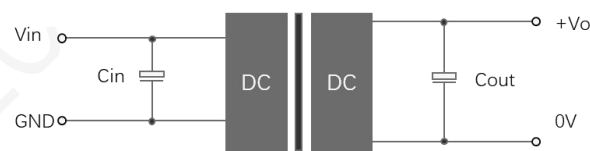


Figure 4: Typical Application Circuit

Vin(VDC)	Cin(μ F)	Vo(VDC)	Cout(μ F)
3.3/5	4.7	3.3/5	10
12	2.2	9	4.7
15	2.2	12	2.2
24	1	15	1

Recommended Capacitive Load Table

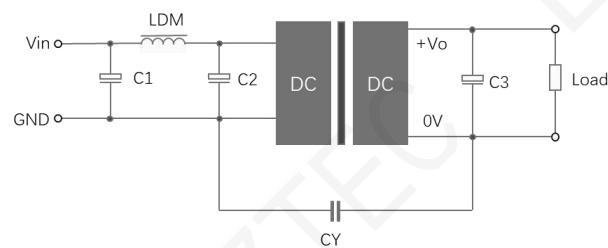


Figure 5: Typical Recommended EMC Circuit

EMI	C1	4.7 μ F /50V
	C2	4.7 μ F /50V
	C3	2.2-22 μ F/50V
	CY	270pF/2kV
	LDM	6.8 μ H

Recommended Circuit Parameter Table

- The input voltage must not exceed the specified operating range; otherwise, permanent irreversible damage to the product may occur.
- Unless stated otherwise, all parameters in this datasheet are measured under the following conditions: 25°C ambient temperature, 40%~75% RH, nominal input voltage, full load with pure resistive output load.
- All performance indicator test methods comply with internal corporate standards.

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