



**POWER MATE
TECHNOLOGY CO.,LTD.**

PMKC03-SERIES



- 3 WATTS REGULATED OUTPUT POWER
- 2:1 WIDE INPUT VOLTAGE RANGE
- INTERNATIONAL SAFETY STANDARD APPROVAL
- INCLUDE 3.3VDC OUTPUT
- HIGH EFFICIENCY UP TO 80%
- STANDARD 24 PIN DIP PACKAGE & SMD TYPE PACKAGE
- DUAL SEPARATE OUTPUT

UL E193009
TUV R50008270
CB JPTUV-003680
CE MARK

The PMKC03 series offer 3 watts of output power from a package in an IC compatible 24pin DIP configuration without derating to 71°C ambient temperature. PMKC03 series have 2:1 wide input voltage of 4.5-6, 9-18, 18-36 and 36-75VDC. The PMKC03 features 1600VDC of isolation, short-circuit protection. All models are particularly suited to telecommunications, industrial, mobile telecom and test equipment applications.

TECHNICAL SPECIFICATION

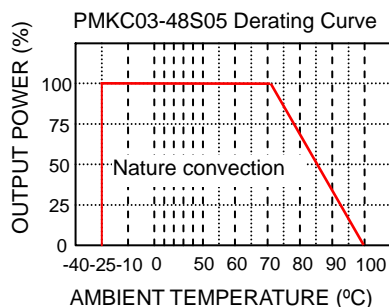
All specifications are typical at nominal input, full load and 25°C otherwise noted

OUTPUT SPECIFICATIONS		
Output power		3 Watts max
Voltage accuracy	Full load and nominal Vin	± 2%
Minimum load (Note 1)		10% of FL
Line regulation	LL to HL at Full Load	± 0.2%
	DS	± 0.5%
Load regulation	25% to 100% FL Single	± 0.2%
	Dual	± 2%
	DS	± 0.5%
Cross regulation (Dual)	Asymmetrical load 25% / 100% FL	± 5%
Ripple and noise	20MHz bandwidth 3.3V/5V	75mVp-p
	others	1%/p-p of Vout max
Temperature coefficient		±0.02% / °C, max
Transient response recovery time	25% load step change	500uS
Over load protection	% of FL at nominal input	180% typ
Short circuit protection		Continuous, automatic recovery
INPUT SPECIFICATIONS		
Input voltage range	5V nominal input	4.5 – 6VDC
	12V nominal input	9 – 18VDC
	24V nominal input	18 – 36VDC
	48V nominal input	36 – 75VDC
Input filter		Pi type
Input surge voltage 100mS max	5V input	15VDC
	12V input	36VDC
	24V input	50VDC
	48V input	100VDC
Input reflected ripple	Nominal Vin and full load	120mAp-p
Start up time	Nominal Vin and constant resistor load	30mS typ

GENERAL SPECIFICATIONS		
Efficiency		See table
Isolation voltage	Input to Output	1600VDC, min
	DS Type, Output to Output	500VDC, min
Isolation resistance		10 ⁹ ohms, min
Isolation capacitance		300pF, max
Switching frequency		100KHz, min
Approvals and standard		IEC60950, UL1950, EN60950
Case material		Non-conductive black plastic
Base material		Non-conductive black plastic
Potting material		Epoxy (UL94-V0)
Dimensions		1.25 X 0.80 X 0.40 Inch
		(31.8 X 20.3 X 10.2 mm)
Weight	DIP	14g (0.48oz)
	SMD	15g (0.52oz)
MTBF (Note 2)		3.706 x 10 ⁶ hrs

ENVIRONMENTAL SPECIFICATIONS	
Operating temperature range	-25°C ~ +71°C
Storage temperature range	-55°C ~ +105°C
Thermal shock	MIL-STD-810D
Vibration	10~55Hz, 2G, 30minutes along X,Y and Z
Relative humidity	5% to 95% RH

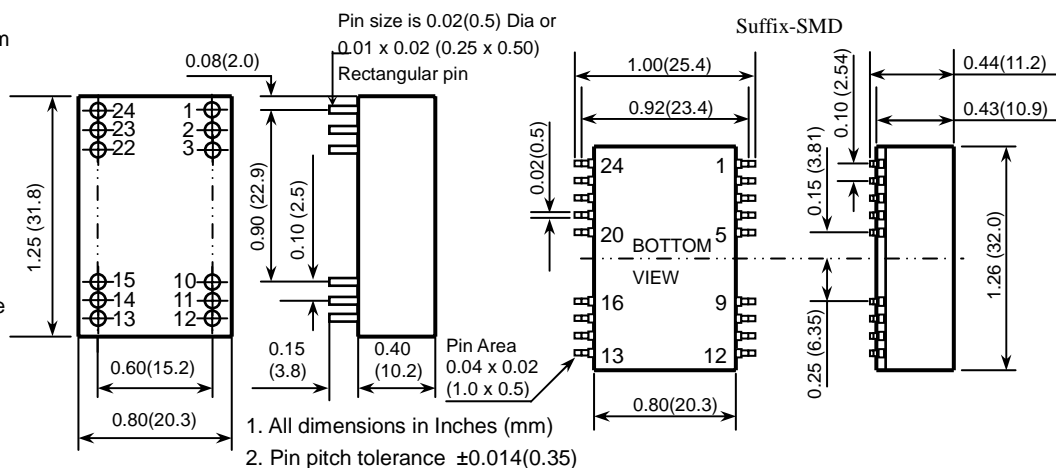
EMC CHARACTERISTICS		
Conducted emissions	EN55022	Level A
Radiated emissions	EN55022	Level A
ESD	EN61000-4-2	Perf. Criteria2
Radiated immunity	EN61000-4-3	Perf. Criteria2
Fast transient	EN61000-4-4	Perf. Criteria2
Surge	EN61000-4-5	Perf. Criteria2
Conducted immunity	EN61000-4-6	Perf. Criteria2



Model Number	Input Range	Output Voltage	Output Current	Input Current ⁽³⁾	Eff ⁽⁴⁾ (%)	Capacitor ⁽⁵⁾ Load max
PMKC03-05S33	4.5 – 6 VDC	3.3 VDC	600mA	638mA	66	2200uF
PMKC03-05S05	4.5 – 6 VDC	5 VDC	600mA	910mA	70	1000uF
PMKC03-05S12	4.5 – 6 VDC	12 VDC	250mA	845mA	75	170uF
PMKC03-05S15	4.5 – 6 VDC	15 VDC	200mA	845mA	75	110uF
PMKC03-05D05	4.5 – 6 VDC	± 5 VDC	± 300mA	870mA	73	± 500uF
PMKC03-05D12	4.5 – 6 VDC	± 12 VDC	± 125mA	845mA	75	± 96uF
PMKC03-05D15	4.5 – 6 VDC	± 15 VDC	± 100mA	870mA	73	± 47uF
PMKC03-05DS05	4.5 – 6 VDC	V1:5 VDC;V2:5 VDC	V1:300mA; V2:300mA	870mA	73	V1:500uF;V2:500uF
PMKC03-05DS12	4.5 – 6 VDC	V1:12 VDC;V2: 12VDC	V1:125mA; V2:125mA	845mA	75	V1:96uF;V2:96uF
PMKC03-05DS15	4.5 – 6 VDC	V1:15 VDC;V2:15 VDC	V1:100mA; V2:100mA	870mA	73	V1:47uF;V2:47uF
PMKC03-12S33	9 – 18 VDC	3.3 VDC	600mA	252mA	70	2200uF
PMKC03-12S05	9 – 18 VDC	5 VDC	600mA	352mA	75	1000uF
PMKC03-12S12	9 – 18 VDC	12 VDC	250mA	334mA	79	170uF
PMKC03-12S15	9 – 18 VDC	15 VDC	200mA	334mA	79	110uF
PMKC03-12D05	9 – 18 VDC	± 5 VDC	± 300mA	357mA	74	± 500uF
PMKC03-12D12	9 – 18 VDC	± 12 VDC	± 125mA	334mA	79	± 96uF
PMKC03-12D15	9 – 18 VDC	± 15 VDC	± 100mA	334mA	79	± 47uF
PMKC03-12DS05	9 – 18 VDC	V1:5 VDC;V2:5 VDC	V1:300mA; V2:300mA	357mA	74	V1:500uF;V2:500uF
PMKC03-12DS12	9 – 18 VDC	V1:12 VDC;V2: 12VDC	V1:125mA; V2:125mA	334mA	79	V1:96uF;V2:96uF
PMKC03-12DS15	9 – 18 VDC	V1:15 VDC;V2:15 VDC	V1:100mA; V2:100mA	334mA	78	V1:47uF;V2:47uF
PMKC03-24S33	18 – 36 VDC	3.3 VDC	600mA	126mA	70	2200uF
PMKC03-24S05	18 – 36 VDC	5 VDC	600mA	174mA	76	1000uF
PMKC03-24S12	18 – 36 VDC	12 VDC	250mA	165mA	80	170uF
PMKC03-24S15	18 – 36 VDC	15 VDC	200mA	165mA	80	110uF
PMKC03-24D05	18 – 36 VDC	± 5 VDC	± 300mA	174mA	76	± 500uF
PMKC03-24D12	18 – 36 VDC	± 12 VDC	± 125mA	167mA	79	± 96uF
PMKC03-24D15	18 – 36 VDC	± 15 VDC	± 100mA	167mA	79	± 47uF
PMKC03-24DS05	18 – 36 VDC	V1:5 VDC;V2:5 VDC	V1:300mA; V2:300mA	174mA	76	V1:500uF;V2:500uF
PMKC03-24DS12	18 – 36 VDC	V1:12 VDC;V2: 12VDC	V1:125mA; V2:125mA	167mA	79	V1:96uF;V2:96uF
PMKC03-24DS15	18 – 36 VDC	V1:15 VDC;V2:15 VDC	V1:100mA; V2:100mA	167mA	79	V1:47uF;V2:47uF
PMKC03-48S33	36 – 75 VDC	3.3 VDC	600mA	61mA	72	2200uF
PMKC03-48S05	36 – 75 VDC	5 VDC	600mA	88mA	75	1000uF
PMKC03-48S12	36 – 75 VDC	12 VDC	250mA	84mA	79	170uF
PMKC03-48S15	36 – 75 VDC	15 VDC	200mA	84mA	79	110uF
PMKC03-48D05	36 – 75 VDC	± 5 VDC	± 300mA	86mA	77	± 500uF
PMKC03-48D12	36 – 75 VDC	± 12 VDC	± 125mA	84mA	79	± 96uF
PMKC03-48D15	36 – 75 VDC	± 15 VDC	± 100mA	84mA	79	± 47uF
PMKC03-48DS05	36 – 75 VDC	V1:5 VDC;V2:5 VDC	V1:300mA; V2:300mA	86mA	77	V1:500uF;V2:500uF
PMKC03-48DS12	36 – 75 VDC	V1:12 VDC;V2: 12VDC	V1:125mA; V2:125mA	84mA	79	V1:96uF;V2:96uF
PMKC03-48DS15	36 – 75 VDC	V1:15 VDC;V2:15 VDC	V1:100mA; V2:100mA	84mA	79	V1:47uF;V2:47uF

Note

- The PMKC03 series required a minimum 10% loading on the output to maintain specified regulation. Operation under no-load condition will not damage these devices, however they may not meet all listed specification
- BELLCORE TR-NWT-000332. Case I: 50% Stress, Temperature at 40°C. (Ground fixed and controlled environment)
- Maximum value at nominal input voltage and full load of standard type.
- Typical value at nominal input voltage and full load.
- Test by minimum Vin and constant resistor load.



DIP PIN CONNECTION

PIN	SINGLE	DUAL	DS	PIN	SINGLE	DUAL	DS
1	+ INPUT	+ INPUT	+ INPUT	24	+ INPUT	+ INPUT	+ INPUT
2	NC	- OUTPUT	- V1 out	23	NC	- OUTPUT	- V1 out
3	NC	COMMON	+ V1 out	22	NC	COMMON	+ V1 out
10	-OUTPUT	COMMON	- V2 out	15	-OUTPUT	COMMON	- V2 out
11	+OUTPUT	+OUTPUT	+ V2 out	14	+OUTPUT	+OUTPUT	+ V2 out
12	- INPUT	- INPUT	- INPUT	13	- INPUT	- INPUT	- INPUT

SMD PIN CONNECTION

PIN	SINGLE	DUAL	DS	PIN	SINGLE	DUAL	DS
1	+ INPUT	+ INPUT	+ INPUT	24	+ INPUT	+ INPUT	+ INPUT
2	NC	- OUTPUT	- V1 out	23	NC	- OUTPUT	- V1 out
3	NC	COMMON	+ V1 out	22	NC	COMMON	+ V1 out
10	-OUTPUT	COMMON	- V2 out	15	-OUTPUT	COMMON	- V2 out
11	+OUTPUT	+OUTPUT	+ V2 out	14	+OUTPUT	+OUTPUT	+ V2 out
12	- INPUT	- INPUT	- INPUT	13	- INPUT	- INPUT	- INPUT
Others	NC	NC	NC	Others	NC	NC	NC