



APPLICATIONS

Wireless Network
Telecom/Datacom
Industry Control System
Measurement Equipment
Semiconductor Equipment

FEATURES

- 3 WATTS REGULATED OUTPUT POWER
- OUTPUT CURRENT UP TO 600mA
- STANDARD 1.25 X 0.80X 0.40 INCH
- HIGH EFFICIENCY UP TO 80%
- 2:1 WIDE INPUT VOLTAGE RANGE
- SWITCHING FREQUENCY (100KHz, MIN)
- INCLUDE 3.3VDC OUTPUT
- STANDARD 24 PIN DIP PACKAGE & SMD TYPE PACKAGE
- DUAL SEPARATE OUTPUT
- CE MARK MEETS 2006/95/EC, 93/68/EEC AND 2004/108/EC
- UL60950-1, EN60950-1 AND IEC60950-1 LICENSED
- ISO9001 CERTIFIED MANUFACTURING FACILITIES
- COMPLIANT TO RoHS EU DIRECTIVE 2002/95/EC

OPTIONS

SMD TYPE

DESCRIPTION

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.

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

OUTPUT SPECIFICATIONS		INPUT SPECIFICATIONS	
Output power	3 Watts, max.	Input voltage range	5V nominal input 4.5 – 6VDC 12V nominal input 9 – 18VDC 24V nominal input 18 – 36VDC 48V nominal input 36 – 75VDC
Voltage accuracy	Full load and nominal Vin ± 1%	Input filter	Pi type
Minimum load (Note 7)	See table	Input surge voltage	5V input 15VDC 12V input 36VDC 24V input 50VDC 48V input 100VDC
Line regulation	LL to HL at Full Load DS ± 0.2% ± 0.5%	Input reflected ripple current	Nominal Vin and full load 120mAp-p
Load regulation	Min Load to Full Load Single 3.3Vout ± 0.3% Others ± 0.2% Dual ± 2% DS ± 2%	Start up time	Nominal Vin and constant resistive load Power up 30mS, typ.
Cross regulation (Dual) Asymmetrical load 25% / 100% FL	± 5%	ENVIRONMENTAL SPECIFICATIONS	
Ripple and noise	20MHz bandwidth See table	Operating ambient temperature	-25°C ~ +71°C(non derating)
Temperature coefficient	±0.02% / °C, max.	Storage temperature range	-55°C ~ +105°C
Transient response recovery time 25% load step change	500µS	Thermal shock	MIL-STD-810F
Over load protection	% of FL at nominal input 180%, typ.	Vibration	MIL-STD-810F
Short circuit protection	Continuous, automatics recovery	Relative humidity	5% to 95% RH
GENERAL SPECIFICATIONS		EMC CHARACTERISTICS	
Efficiency	See table	EMI	EN55022 Class A
Isolation voltage	Input to Output 1600VDC, min. DS Type, Output to Output 500VDC, min.	ESD	EN61000-4-2 Air ± 8KV Perf. Criteria A Contact ± 6KV
Isolation resistance	10 ⁹ ohms, min.	Radiated immunity	EN61000-4-3 10 V/m Perf. Criteria A
Isolation capacitance	300pF, max.	Fast transient (Note 6)	EN61000-4-4 ± 2KV Perf. Criteria B
Switching frequency	100KHz, min.	Surge (Note 6)	EN61000-4-5 ± 1KV Perf. Criteria B
Approvals and standard	IEC60950-1, UL60950-1, EN60950-1	Conducted immunity	EN61000-4-6 10 Vr.m.s Perf. Criteria A
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 1)	BELLCORE TR-NWT-000332 3.706 x 10 ⁵ hrs MIL-HDBK-217F 3.018 x 10 ⁶ hrs		



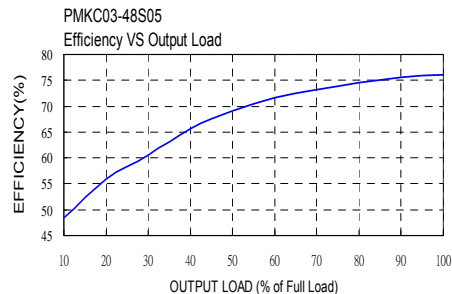
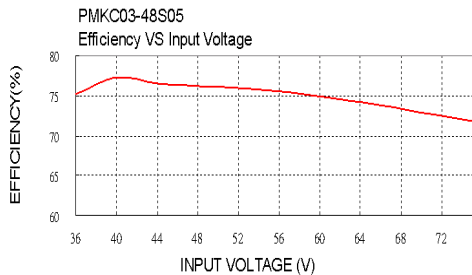
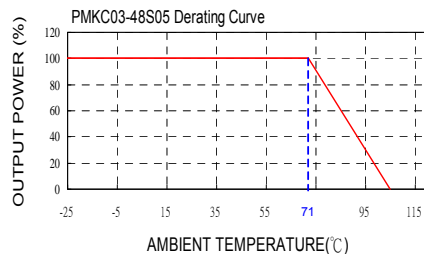


Model Number	Input Range	Output Voltage	Output Current		Output ⁽⁴⁾ Ripple&Noise	Input Current		Eff ⁽⁴⁾ (%)	Capacitor ⁽⁵⁾ Load max
			Min. load	Full load		No load ⁽³⁾	Full load ⁽²⁾		
PMKC03-05S33	4.5 – 6 VDC	3.3 VDC	60mA	600mA	75mVp-p	15mA	609mA	69	2200µF
PMKC03-05S05	4.5 – 6 VDC	5 VDC	60mA	600mA	75mVp-p	15mA	857mA	74	1000µF
PMKC03-05S12	4.5 – 6 VDC	12 VDC	25mA	250mA	120mVp-p	30mA	845mA	75	170µF
PMKC03-05S15	4.5 – 6 VDC	15 VDC	20mA	200mA	150mVp-p	25mA	845mA	75	110µF
PMKC03-05D05	4.5 – 6 VDC	± 5 VDC	±30mA	± 300mA	75mVp-p	15mA	870mA	73	± 500µF
PMKC03-05D12	4.5 – 6 VDC	± 12 VDC	±12mA	± 125mA	120mVp-p	20mA	845mA	75	± 96µF
PMKC03-05D15	4.5 – 6 VDC	± 15 VDC	±10mA	± 100mA	150mVp-p	50mA	845mA	75	± 47µF
PMKC03-05DS05	4.5 – 6 VDC	V1:5VDC;V2:5VDC	V1: 30mA;V2: 30mA	V1:300mA;V2:300mA	75mVp-p	30mA	870mA	73	V1:500µF;V2:500µF
PMKC03-05DS12	4.5 – 6 VDC	V1:12VDC;V2:12VDC	V1:12mA;V2:12mA	V1:125mA;V2:125mA	120mVp-p	40mA	845mA	75	V1:96µF;V2:96µF
PMKC03-05DS15	4.5 – 6 VDC	V1:15VDC;V2:15VDC	V1:10mA;V2:10mA	V1:100mA;V2:100mA	150mVp-p	40mA	870mA	73	V1:47µF;V2:47µF
PMKC03-12S33	9 – 18 VDC	3.3 VDC	60mA	600mA	75mVp-p	20mA	252mA	70	2200µF
PMKC03-12S05	9 – 18 VDC	5 VDC	60mA	600mA	75mVp-p	20mA	352mA	75	1000µF
PMKC03-12S12	9 – 18 VDC	12 VDC	25mA	250mA	120mVp-p	20mA	334mA	79	170µF
PMKC03-12S15	9 – 18 VDC	15 VDC	20mA	200mA	150mVp-p	30mA	334mA	79	110µF
PMKC03-12D05	9 – 18 VDC	± 5 VDC	±30mA	± 300mA	75mVp-p	20mA	357mA	74	± 500µF
PMKC03-12D12	9 – 18 VDC	± 12 VDC	±12mA	± 125mA	120mVp-p	35mA	334mA	79	± 96µF
PMKC03-12D15	9 – 18 VDC	± 15 VDC	±10mA	± 100mA	150mVp-p	45mA	334mA	79	± 47µF
PMKC03-12DS05	9 – 18 VDC	V1:5VDC;V2:5VDC	V1: 30mA;V2: 30mA	V1:300mA;V2:300mA	75mVp-p	10mA	357mA	74	V1:500µF;V2:500µF
PMKC03-12DS12	9 – 18 VDC	V1:12VDC;V2:12VDC	V1:12mA;V2:12mA	V1:125mA;V2:125mA	120mVp-p	15mA	334mA	79	V1:96µF;V2:96µF
PMKC03-12DS15	9 – 18 VDC	V1:15VDC;V2:15VDC	V1:10mA;V2:10mA	V1:100mA;V2:100mA	150mVp-p	30mA	334mA	79	V1:47µF;V2:47µF
PMKC03-24S33	18 – 36 VDC	3.3 VDC	60mA	600mA	75mVp-p	10mA	126mA	70	2200µF
PMKC03-24S05	18 – 36 VDC	5 VDC	60mA	600mA	75mVp-p	10mA	174mA	76	1000µF
PMKC03-24S12	18 – 36 VDC	12 VDC	25mA	250mA	120mVp-p	20mA	165mA	80	170µF
PMKC03-24S15	18 – 36 VDC	15 VDC	20mA	200mA	150mVp-p	20mA	165mA	80	110µF
PMKC03-24D05	18 – 36 VDC	± 5 VDC	±30mA	± 300mA	75mVp-p	20mA	174mA	76	± 500µF
PMKC03-24D12	18 – 36 VDC	± 12 VDC	±12mA	± 125mA	120mVp-p	20mA	167mA	79	± 96µF
PMKC03-24D15	18 – 36 VDC	± 15 VDC	±10mA	± 100mA	150mVp-p	20mA	164mA	80	± 47µF
PMKC03-24DS05	18 – 36 VDC	V1:5VDC;V2:5VDC	V1: 30mA;V2: 30mA	V1:300mA;V2:300mA	75mVp-p	20mA	174mA	76	V1:500µF;V2:500µF
PMKC03-24DS12	18 – 36 VDC	V1:12VDC;V2:12VDC	V1:12mA;V2:12mA	V1:125mA;V2:125mA	120mVp-p	20mA	167mA	79	V1:96µF;V2:96µF
PMKC03-24DS15	18 – 36 VDC	V1:15VDC;V2:15VDC	V1:10mA;V2:10mA	V1:100mA;V2:100mA	150mVp-p	20mA	164mA	80	V1:47µF;V2:47µF
PMKC03-48S33	36 – 75 VDC	3.3 VDC	60mA	600mA	75mVp-p	10mA	61mA	72	2200µF
PMKC03-48S05	36 – 75 VDC	5 VDC	60mA	600mA	75mVp-p	10mA	88mA	75	1000µF
PMKC03-48S12	36 – 75 VDC	12 VDC	25mA	250mA	120mVp-p	10mA	84mA	79	170µF
PMKC03-48S15	36 – 75 VDC	15 VDC	20mA	200mA	150mVp-p	10mA	84mA	79	110µF
PMKC03-48D05	36 – 75 VDC	± 5 VDC	±30mA	± 300mA	75mVp-p	10mA	86mA	77	± 500µF
PMKC03-48D12	36 – 75 VDC	± 12 VDC	±12mA	± 125mA	120mVp-p	10mA	84mA	79	± 96µF
PMKC03-48D15	36 – 75 VDC	± 15 VDC	±10mA	± 100mA	150mVp-p	10mA	84mA	79	± 47µF
PMKC03-48DS05	36 – 75 VDC	V1:5VDC;V2:5VDC	V1: 30mA;V2: 30mA	V1:300mA;V2:300mA	75mVp-p	10mA	86mA	77	V1:500µF;V2:500µF
PMKC03-48DS12	36 – 75 VDC	V1:12VDC;V2:12VDC	V1:12mA;V2:12mA	V1:125mA;V2:125mA	120mVp-p	10mA	84mA	79	V1:96µF;V2:96µF
PMKC03-48DS15	36 – 75 VDC	V1:15VDC;V2:15VDC	V1:10mA;V2:10mA	V1:100mA;V2:100mA	150mVp-p	10mA	84mA	79	V1:47µF;V2:47µF

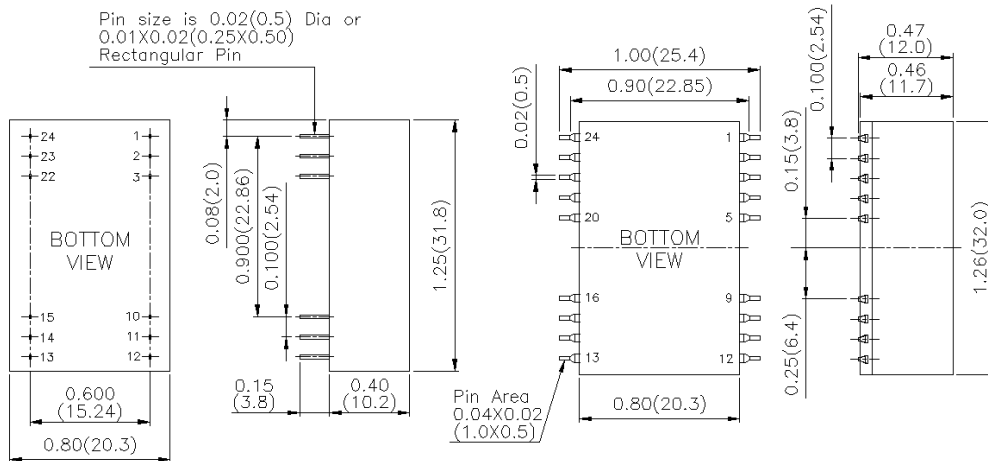
Note

- BELLCORE TR-NWT-000332. Case 1: 50% Stress, Temperature at 40°C.
MIL-HDBK-217F Notice2 @Ta=25 °C, Full load(Ground, Benign, controlled environment).
- Maximum value at nominal input voltage and full load.
- Typical value at nominal input voltage and no load.
- Typical value at nominal input voltage and full load.
- Test by minimum Vin and constant resistive load.
- An external input filter capacitor is required if the module has to meet EN61000-4-4, EN61000-4-5.
The filter capacitor Power Mate suggest: Nippon chemi-con KY series, 220µF/100V, ESR 48mΩ.
- The output requires a minimum 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.





Suffix-SMD



- All dimensions in Inches (mm)
Tolerance: X.XX±0.02 (X.X±0.5)
X.XXX±0.01 (X.XX±0.25)
- Pin pitch tolerance ±0.01(0.25)
- Pin dimension tolerance ±0.004 (0.1)

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

