MT3A- series

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

OUTPUT SPECIFICATIONS			
Output power			3 Watts, max.
Voltage accuracy	Full load and nominal Vin		± 1%
Minimum load (Note 5)			See table
Line regulation	LL to HL at Full Load		± 0.2%
Load regulation	Min Load to Full Load	Single 3.3Vout	± 0.3%
		Single Others	± 0.2%
		Dual	± 2%
Cross regulation (Dual)	Asymmetrical load 25% / 100% FL		± 5%
Ripple and noise	20MHz bandwidth		See table
Temperature coefficient			±0.02% / ºC, max.
Transient response recovery time	25% load step change		500µS
Over load protection	% of FL at nominal input		180%, typ.
Short circuit protection			Continuous, automatics recovery

GENERAL SPECIFICATIONS		
Efficiency		See table
Isolation voltage	Input to Output	500VDC ,min
	Input (Output)to case	500VDC ,min
Isolation resistance		10^9ohms, min.
Isolation capacitance		300pF, max.
Switching frequency		100KHz, min.
Design meet safety standard		IEC60950-1,UL60950-1,EN60950-1
Case material		Nickel-coated copper
Base material		Non-conductive black plastic
Potting material		Epoxy (UL94-V0)
MTBF (Note 1)	BELLCORE TR-NWT-000332	3.706 x 10^6 hrs
	MIL-HDBK-217F	3.018 x 10^6 hrs

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 current	Nominal Vin and full load	120mAp-p
Start up time	Nominal Vin and constant resistive load	Power up 30mS, typ.

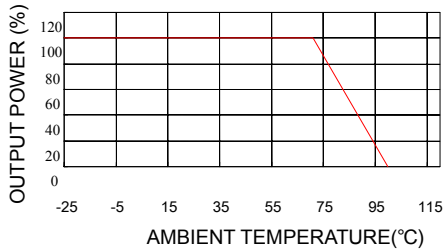
ENVIRONMENTAL SPECIFICATIONS	
Operating ambient temperature	-25ºC ~ +85ºC (with derating)
Storage temperature range	-40ºC ~ +125ºC
Maximum case temperature	100ºC
Thermal shock	MIL-STD-810F
Vibration	MIL-STD-810F
Relative humidity	5% to 95% RH

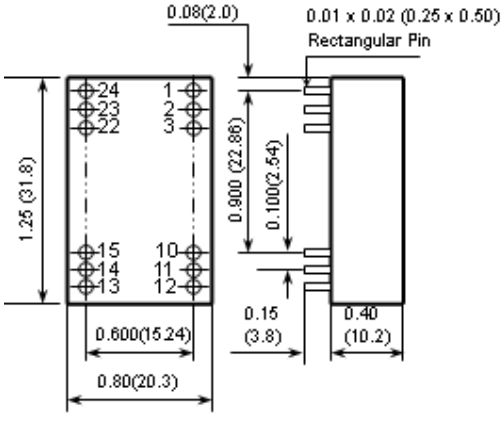
EMC CHARACTERISTICS		
EMI	EN55022	Class A

Note
1. BELLCORE TR-NWT-000332. Case 1: 50% Stress, Temperature at 40ºC.
   MIL-HDBK-217F Notice2 @Ta=25 ºC, Full load(Ground, Benign, controlled environment).
2. Maximum value at nominal input voltage and full load.
3. Typical value at nominal input voltage and full load.
4. Test by minimum Vin and constant resistive load.
5. 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.

Model Number	Input Range	Output Voltage	Output Current		Output [3] rrr Nipple&Noise	Input [2] Current	Eff [3] (%)	Capacitor [4] Load max
			Min. load	Full load				
MT3A-0533SI	4.5 – 6 VDC	3.3 VDC	60mA	600mA	75mVp-p	628mA	67	2200μF
MT3A-0505SI	4.5 – 6 VDC	5 VDC	60mA	600mA	75mVp-p	882mA	72	1000μF
MT3A-0512SI	4.5 – 6 VDC	12 VDC	25mA	250mA	120mVp-p	869mA	73	170μF
MT3A-0512WI	4.5 – 6 VDC	± 12 VDC	±12mA	± 125mA	120mVp-p	869mA	73	± 96μF
MT3A-0515WI	4.5 – 6 VDC	± 15 VDC	±10mA	± 100mA	150mVp-p	882mA	72	± 47μF
MT3A-1233SI	9 – 18 VDC	3.3 VDC	60mA	600mA	75mVp-p	257mA	68	2200μF
MT3A-1205SI	9 – 18 VDC	5 VDC	60mA	600mA	75mVp-p	362mA	73	1000μF
MT3A-1212SI	9 – 18 VDC	12 VDC	25mA	250mA	120mVp-p	342mA	77	170μF
MT3A-1212WI	9 – 18 VDC	± 12 VDC	±12mA	± 125mA	120mVp-p	342mA	77	± 96μF
MT3A-1215WI	9 – 18 VDC	± 15 VDC	±10mA	± 100mA	150mVp-p	342mA	77	± 47μF
MT3A-2433SI	18 – 36 VDC	3.3 VDC	60mA	600mA	75mVp-p	128mA	68	2200μF
MT3A-2405SI	18 – 36 VDC	5 VDC	60mA	600mA	75mVp-p	178mA	74	1000μF
MT3A-2412SI	18 – 36VDC	12 VDC	25mA	250mA	120mVp-p	171mA	77	170μF
MT3A-2412WI	18 – 36 VDC	± 12 VDC	±12mA	± 125mA	120mVp-p	171mA	77	± 96μF
MT3A-2415WI	18 – 36 VDC	± 15 VDC	±10mA	± 100mA	150mVp-p	171mA	77	± 47μF
MT3A-4833SI	36 – 75 VDC	3.3 VDC	60mA	600mA	75mVp-p	63mA	70	2200μF
MT3A-4805SI	36 – 75 VDC	5 VDC	60mA	600mA	75mVp-p	91mA	73	1000μF
MT3A-4812SI	36 – 75 VDC	12 VDC	25mA	250mA	120mVp-p	86mA	77	170μF
MT3A-4812WI	36 – 75 VDC	± 12 VDC	±12mA	± 125mA	120mVp-p	86mA	77	± 96μF
MT3A-4815WI	36 – 75 VDC	± 15 VDC	±10mA	± 100mA	150mVp-p	87mA	76	± 47μF

MT3A-4805SI





DIP PIN CONNECTION					
PIN	SINGLE	DUAL	PIN	SINGLE	DUAL
1	+ INPUT	+ INPUT	24	+ INPUT	+ INPUT
2	NC	- OUTPUT	23	NC	- OUTPUT
3	NC	COMMON	22	NC	COMMON
10	-OUTPUT	COMMON	15	- OUTPUT	COMMON
11	+OUTPUT	+OUTPUT	14	+OUTPUT	+OUTPUT
12	- INPUT	- INPUT	13	- INPUT	- INPUT