



# MT3A- series

**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		± 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%
		Dual Others	± 0.2%
			± 2%
Cross regulation (Dual)	Asymmetrical load 25% / 100% FL		± 5%
Ripple and noise	20MHz bandwidth		See table
Temperature coefficient			±0.02% / °C, max.
Transient response recovery time	25% load step change		500µS
Over load protection	% of FL at nominal input		180%, typ.
Short circuit protection		Continuous, automatic recovery	
GENERAL SPECIFICATIONS			
Efficiency			See table
Isolation voltage	Input to Output		500VDC ,min
	Input (Output)to case		500VDC ,min
Isolation resistance			10 <sup>9</sup> ohms, 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 <sup>6</sup> hrs
	MIL-HDBK-217F		3.018 x 10 <sup>6</sup> 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		120mA <sub>p-p</sub>
Start up time	Nominal Vin and constant resistive load	Power up	30mS, typ.
ENVIRONMENTAL SPECIFICATIONS			
Operating ambient temperature			-25°C ~ +85°C (with derating)
Storage temperature range			-40°C ~ +125°C
Maximum case temperature			100°C
Thermal shock			MIL-STD-810F
Vibration			MIL-STD-810F
Relative humidity			5% to 95% RH
EMC CHARACTERISTICS			
EMI	EN55022		Class A

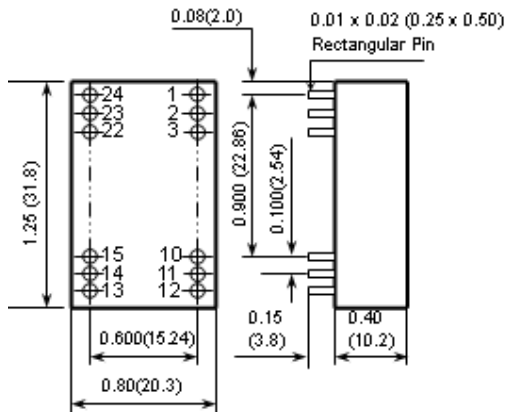
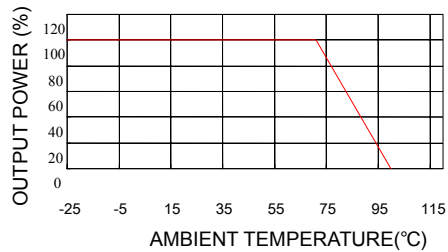
**Note**

- 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 full load.
- Test by minimum Vin and constant resistive load.
- 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 <sup>(3)</sup> rrr Nipple&Noise	Input <sup>(2)</sup> Current	Eff <sup>(3)</sup> (%)	Capacitor <sup>(4)</sup> 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