



## MT3A- series

**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.		5V nominal input	4.5 – 6VDC		
Voltage accuracy	Full load and nominal Vin	± 1%		12V nominal input	9 – 18VDC		
Minimum load (Note 5)		See table		24V nominal input	18 – 36VDC		
Line regulation	LL to HL at Full Load	± 0.2%		48V nominal input	36 – 75VDC		
Load regulation	Min Load to Full Load	Single 3.3Vout ± 0.3% Others ± 0.2% Dual ± 2%		Input filter	PI type		
Cross regulation (Dual) Asymmetrical load 25% / 100% FL		± 5%		5V input	15VDC		
Ripple and noise	20MHz bandwidth	See table		12V input	36VDC		
Temperature coefficient		±0.02% / °C, max.		24V input	50VDC		
Transient response recovery time 25% load step change		500µS		48V input	100VDC		
Over load protection	% of FL at nominal input	180%, typ.		Input reflected ripple current	Nominal Vin and full load	120mA <sub>p-p</sub>	
Short circuit protection		Continuous, automatics recovery		Start up time	Nominal Vin and constant resistive load	Power up	30mS, typ.
GENERAL SPECIFICATIONS							
Efficiency		See table		ENVIRONMENTAL SPECIFICATIONS			
Isolation voltage	Input to Output Input (Output)to case	500VDC ,min 500VDC ,min		Operating ambient temperature	-25°C ~ +85°C (with derating)		
Isolation resistance		10 <sup>9</sup> ohms, min.		Storage temperature range	-40°C ~ +125°C		
Isolation capacitance		300pF, max.		Maximum case temperature	100°C		
Switching frequency		100KHz, min.		Thermal shock	MIL-STD-810F		
Design meet safety standard		IEC60950-1,UL60950-1,EN60950-1		Vibration	MIL-STD-810F		
Case material		Nickel-coated copper		Relative humidity	5% to 95% RH		
Base material		Non-conductive black plastic		EMC CHARACTERISTICS			
Potting material		Epoxy (UL94-V0)		EMI	EN55022	Class A	
MTBF (Note 1)	BELLCORE TR-NWT-000332 MIL-HDBK-217F	3.706 x 10 <sup>6</sup> hrs 3.018 x 10 <sup>6</sup> hrs					

### Note

1. 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).
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) 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 – 36 VDC	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

