



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.			Input voltage range	5V nominal input 12V nominal input 24V nominal input 48V nominal input	4.5 – 6VDC 9 – 18VDC 18 – 36VDC 36 – 75VDC	
Voltage accuracy	Full load and nominal Vin		± 1%	Input filter	Pi type		
Minimum load (Note 5)	See table			Input surge voltage	5V input 12V input 24V input 48V input	15VDC 36VDC 50VDC 100VDC	
Line regulation	LL to HL at Full Load		± 0.2%	Input reflected ripple current	Nominal Vin and full load		120mA _{p-p}
Load regulation	Min Load to Full Load	Single	3.3V _{out} ± 0.3%	Start up time	Nominal Vin and constant resistive load	Power up	30mS, typ.
		Dual	Others ± 0.2%				
			± 2%	ENVIRONMENTAL SPECIFICATIONS			
Cross regulation (Dual)	Asymmetrical load 25% / 100% FL		± 5%	Operating ambient temperature	-25°C ~ +85°C (with derating)		
Ripple and noise	20MHz bandwidth		See table	Storage temperature range	-40°C ~ +125°C		
Temperature coefficient	±0.02% / °C, max.			Maximum case temperature	100°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, automatic recovery			Relative humidity	5% to 95% RH		
GENERAL SPECIFICATIONS				EMC CHARACTERISTICS			
Efficiency	See table			EMI	EN55022		Class A
Isolation voltage	Input to Output		500VDC ,min				
	Input (Output)to case		500VDC ,min				
Isolation resistance	10 ⁹ 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 ⁶ hrs				
	MIL-HDBK-217F		3.018 x 10 ⁶ hrs				

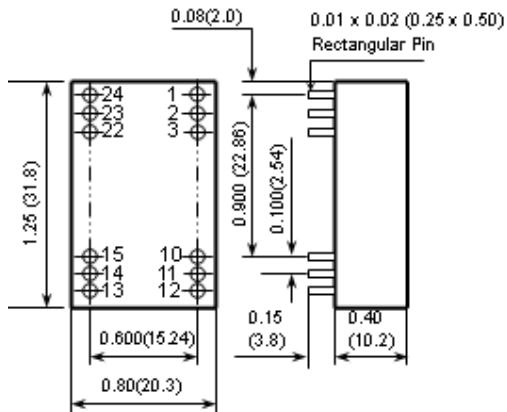
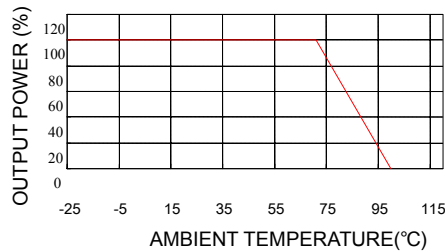
Note

- 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 ⁽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