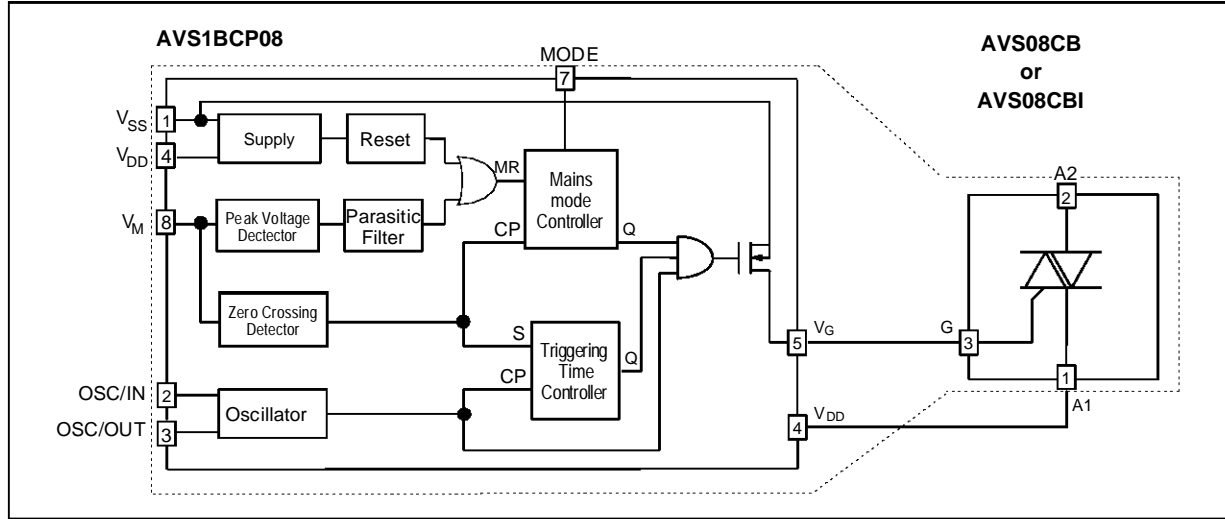


AVS08

BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATINGS

CONTROLLER AVS1BCP08

Symbol	Parameter	Value		Unit
		Min.	Max.	
V _{SS}	Supply voltage	- 12	0.5	V
V _I / V _O	I / O voltage	V _{SS} - 0.5	0.5	V
I _I / I _O	I / O current	- 40	+ 40	mA
T _{stg}	Storage Temperature	- 60	+ 150	°C
T _{oper}	Operating Temperature code " C "	0	+ 70	°C

TRIAC AVS08CB / AVS08CBI T_j = +25°C (unless otherwise specified)

Symbol	Parameter	Value	Unit	
V _{DRM}	Repetitive peak off-state voltage (2)	± 500	V	
I _{T(RMS)}	RMS on-state current (360° conduction angle)	AVS08CB T _C = 100°C	5	A
		AVS08CBI T _C = 95°C		
I _{TSM}	Non repetitive surge peak on-state current (T _j initial = 25°C)	t = 8.3ms t = 10ms	70 65	A
I ² t	I ² t value	t = 10ms	21	A ² s
di/dt	Critical rate of rise of on-state current (1)	Repetitive F = 50Hz	20	A/μs
		Non Repetitive	100	
T _{stg} T _j	Storage Temperature Junction Temperature Range	- 40 + 125 - 10 + 110	°C	

(1) Gate supply : I_G = 100mA - di/dt = 1A/μs

(2) T_j = 125°C

THERMAL RESISTANCES

TRIAC AVS08CB / AVS08CBI

Symbol	Parameter	Value	Unit	
Rth (j-a)	Junction-to-ambient	60	°C/W	
Rth (j-c) DC	Junction-to-case for DC	AVS08CB	5.4	°C/W
		AVS08CBI	6.3	
Rth (j-c) AC	Junction-to-case for 360° conduction angle (F = 50Hz)	AVS08CB	4.0	°C/W
		AVS08CBI	4.7	

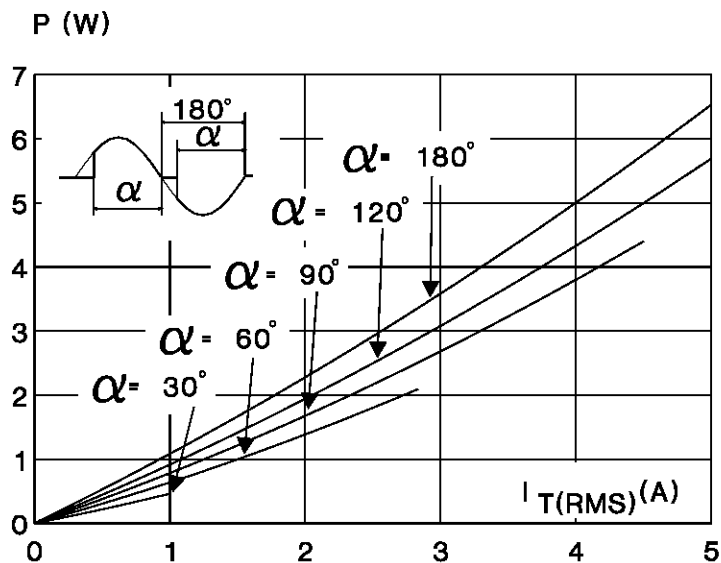
DC GENERAL ELECTRICAL CHARACTERISTICS

TRIAC AVS08CB / AVS08CBI

Symbol	Parameter	Value		Unit
		Min.	Max.	
V _{TM} *	I _{TM} = 7A t _p = 10ms T _j = 25°C		1.65	V
I _{DRM} *	V _{DRM} rated Gate open T _j = 25°C		10	μA

* For either polarity of electrode A2 voltage with reference to electrode A1.

Fig. 1 :Maximum RMS power dissipation versus RMS on-state current (F = 60Hz).
(Curves are cut off by (di/dt)_c limitation)



AVS08

DC GENERAL ELECTRICAL CHARACTERISTICS (continued)

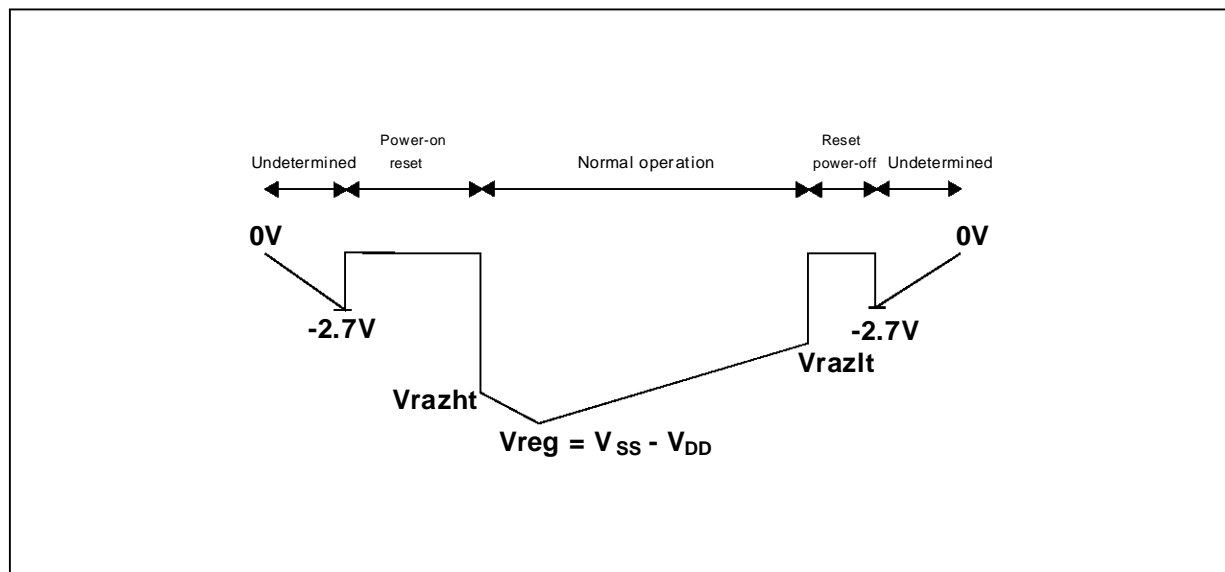
CONTROLLER AVS1BCP08 $T_{oper} = 25^{\circ}C$ (unless otherwise specified)

Symbol	Parameter	Value			Unit
		Min	Typ	Max	
V_{SS} (pin 1) (Vreg)	Shunt regulator	- 10	- 9	- 8	V
I_{SS} (pin 1) (Vreg) (@ $V_{SS} = 9V$)	Supply current	0.4		25	mA
I_{SS} (pin 1) (@ triac gate non connected)	Quiescent current			1	mA
F (pin 3) (@ $R = 91k\Omega$) ($C = 100pF$)	Oscillator frequency	42	44	46	KHz
V_M (pin 8) V_{th} (3)	Peak voltage of detection high-threshold	4.08	4.25	4.42	V
V_M (pin 8) V_h (3)	Peak voltage of detection hysteresis	0.370	0.4	0.420	V
(1) V_M (pin 8) V_{th} (3)	Zero-crossing detection high-threshold	95	110	125	mV
V_M (pin 8) V_h (3)	Zero-crossing detection hysteresis	27	50	80	mV
(2) V_{razht} (4)	Power-on-reset activation threshold		$V_{reg} \times 0.89$		V
(2) V_{razilt} (4)	Power-down-reset activation threshold	3		6.95	V
Mode (pin 7)	V_{IL} (4) V_{IH} (4)	0.7 V_{reg}		0.3 V_{reg}	V
V_G (pin 5)	V_{OL} ($I_{VG} = 25mA$) Leakage current ($V_G = V_{DD}$)			1 + 50	V μA

NOTES :

- (1) : This value gives a typical noise immunity on the zero-crossing detection of $110mV \times 1018/18 = 6.20V$ on the main supply
- (2) : See following diagram
- (3) : Voltage referred to V_{SS}
- (4) : Voltage referred to V_{DD}

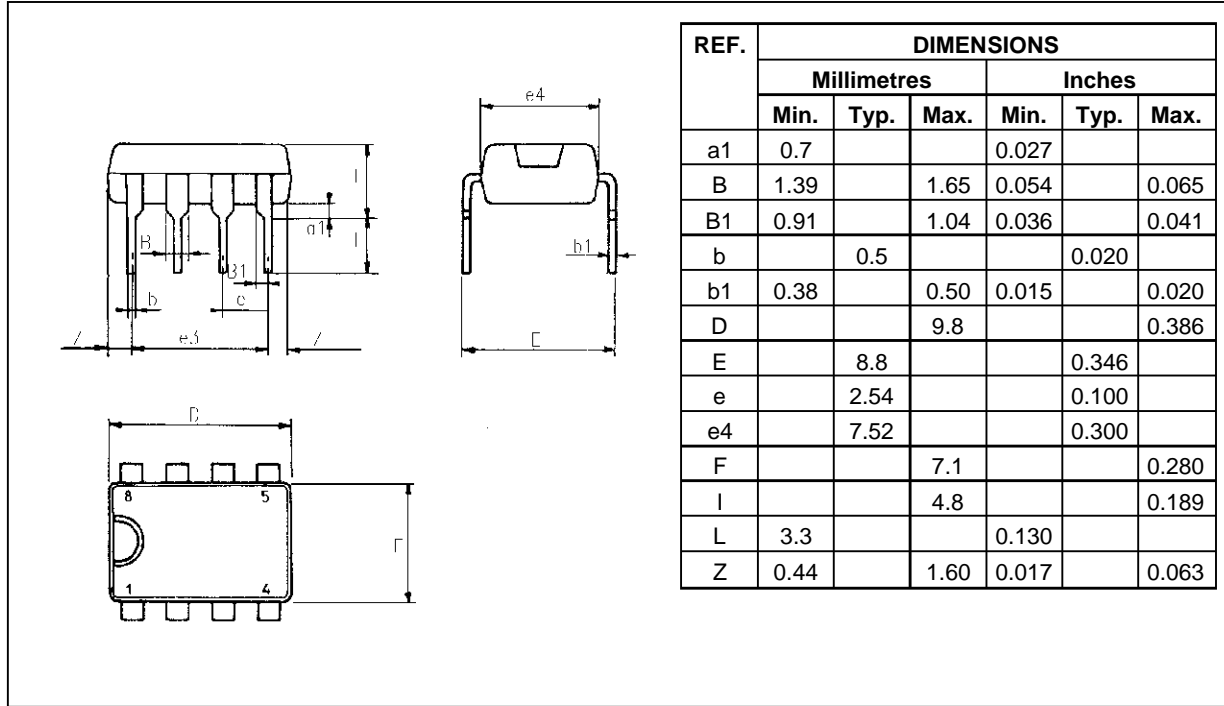
POWER-ON AND POWER-OFF RESET BEHAVIOUR



PACKAGE MECHANICAL DATA

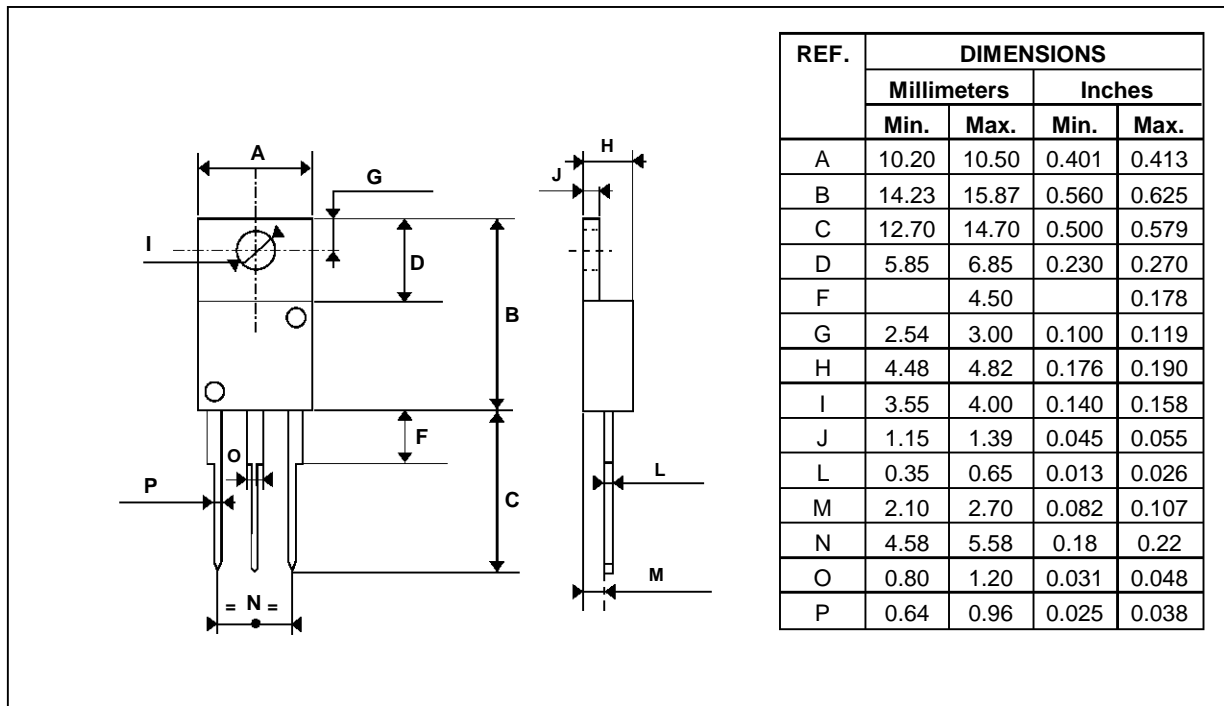
8 PINS - PLASTICDIP

CONTROLLER



TO220AB (Plastic)

TRIAC



Cooling method : C
 Marking : Type number
 Weight : 2.3 g
 Recommended torque value : 0.8 m.N.
 Maximum torque value : 1 m.N.

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