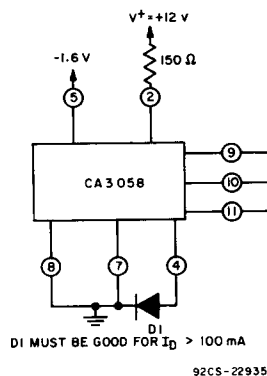


CA3058/...

High-Reliability Zero-Voltage Switch

For 50/60 and 400-Hz Thyristor Control Applications

The CA3058 Slash (/) Series type is supplied in the 14-lead dual-in-line ceramic packages (D suffix).



Burn-in and operating life test circuit.

TABLE A. POST BURN-IN, FINAL ELECTRICAL AND GROUP A SAMPLING TESTS

CHARACTERISTIC	SYMBOL	TEST CONDITIONS	LIMITS FOR INDICATED TEMPERATURES (°C)						UNITS
			MINIMUM			MAXIMUM			
			-55	+25	+125	-55	+25	+125	
DC Supply Voltage	V _S	R _S = 10 kΩ, I _L = 0	5.4	5.5	5.4	8.0	7.5	8.0	V
Output Leakage Current (Inhibit Mode)	I ₄		—	—	—	20	10	20	μA
Input Bias Current	I _I		—	—	—	2.55	2.0	2.0	μA
Inhibit Input Ratio	V _G /V _Z	Voltage ratio of terminal 9 to terminal 2.	0.450	0.465	0.450	0.520	0.520	0.520	
Peak Output Current (Pulsed) With Internal Power Supply	I _{OM} (4)	Terminal 3 open, V _{GT} = 0	—	50	—	—	—	—	mA
		Terminals 2 and 3 shorted, V _{GT} = 0	—	90	—	—	—	—	mA
Pulse Duration After Zero Crossing: For Positive dv/dt For Negative dv/dt		C external = 0	—	70	—	—	140	—	μS
		R external = 0	—	70	—	—	140	—	μS

TABLE B. DELTA LIMITS at $T_A = 25^\circ\text{C}$ (/1 only)

CHARACTERISTIC	SYMBOL	TEST CONDITIONS at $T_A = 25^\circ\text{C}$	LIMITS	UNITS
			MAX. Δ	
DC Supply Voltage	V_S	$R_S = 10\text{ k}\Omega$, $I_L = 0$	± 0.2	V
Output Leakage Current (Inhibit Mode)	I_4		± 0.5	μA
Peak Output Current (Pulsed) With Internal Power Supply	$I_{OM}(4)$	Terminal 3 Open, $V_{GT}=0$	± 10	mA
Input Bias Current	I_I		± 0.2	μA

TABLE C. GROUPS C AND D END-POINT TESTS at $T_A = 25^\circ\text{C}$

CHARACTERISTIC	SYMBOL	TEST CONDITIONS	LIMITS		UNITS
			MIN.	MAX.	
DC Supply Voltage	V_S	$R_S = 10\text{ k}\Omega$, $I_L = 0$	5.4	7.6	V
Output Leakage Current (Inhibit Mode)	I_4		—	11	μA
Peak Output Current (Pulsed) With Internal Power Supply	$I_{OM}(4)$	Terminal 3 Open, $V_{GT} = 0$	45	—	mA
Input Bias Current	I_I		—	2.2	μA