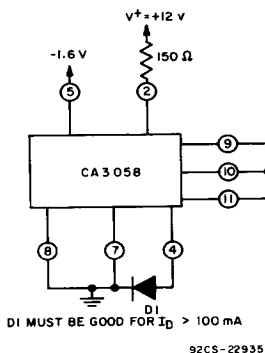


# CA3058/...

## 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	$V_S$	$R_S = 10 \text{ k}\Omega, I_L = 0$	5.4	5.5	5.4	8.0	7.5	8.0	V
Output Leakage Current (Inhibit Mode)	$I_4$		—	—	—	20	10	20	$\mu\text{A}$
Input Bias Current	$I_I$		—	—	—	2.55	2.0	2.0	$\mu\text{A}$
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	—	$\mu\text{S}$
		R external = 0	—	70	—	—	140	—	$\mu\text{S}$

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. $\Delta$	
DC Supply Voltage	$V_S$	$R_S = 10\text{ k}\Omega, I_L = 0$	$\pm 0.2$	V
Output Leakage Current (Inhibit Mode)	$I_4$		$\pm 0.5$	$\mu\text{A}$
Peak Output Current (Pulsed) With Internal Power Supply	$I_{OM(4)}$	Terminal 3 Open, $V_{GT} = 0$	$\pm 10$	mA
Input Bias Current	$I_I$		$\pm 0.2$	$\mu\text{A}$

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	$\mu\text{A}$
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	$\mu\text{A}$