



VERY HIGH LEVEL DIGITAL DRIVER

0008

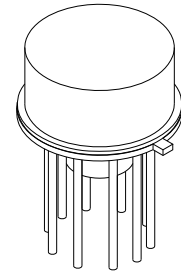
M.S.KENNEDY CORP.

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FEATURES:

- Single Supply Operation From 10V to 45V
- Replaces NH/DH0008
- 'And' Input Logic With Expander
- External Transition Time Control
- Output Current to 3A Peak
- Available to DSCC SMD 5962-87617

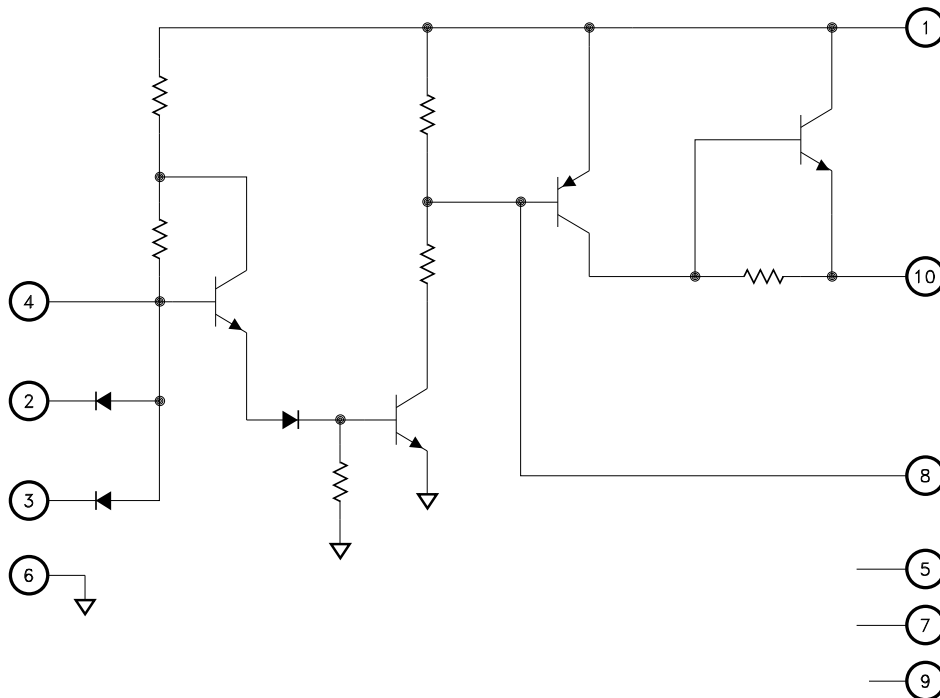


MSK0008

DESCRIPTION:

The MSK 0008 is an integrated high voltage, high current driver designed to accept standard DTL or TTL logic levels and drive a pulsed load of up to 3A at 28V. AND inputs are provided along with an Expander connection, should additional gating be required. The addition of an external capacitor and resistor provides control of the rise and fall times of the output. The device is packaged in a hermetic 10 pin can.

EQUIVALENT SCHEMATIC



TYPICAL APPLICATIONS

- Logic Level Translator
- Relay Driver
- Lamp Driver
- High Level Line Driver

PIN-OUT INFORMATION

- | | |
|------------|-------------------------|
| 1 Vcc | 10 Output |
| 2 Input | 9 NC |
| 3 Input | 8 Response Time Control |
| 4 Expander | 7 NC |
| 5 NC | 6 Ground |

ABSOLUTE MAXIMUM RATINGS

V_{CC}	Supply Voltage ($t \leq 0.1$ sec)	60V	T_{ST}	Storage Temperature Range	-65°C to +150°C
I_{OUT}	Output Current (50mS)	3A	T_{LD}	Lead Temperature Range	300°C
V_{IN}	Input Voltage	5.5V		(10 Seconds)	
I_{IN}	Expander Input Current	5mA	T_C	Case Operating Temperature	
				MSK 0008H.	-55°C to +125°C
				MSK 0008.	-40°C to +85°C
			T_J	Junction Temperature	175°C

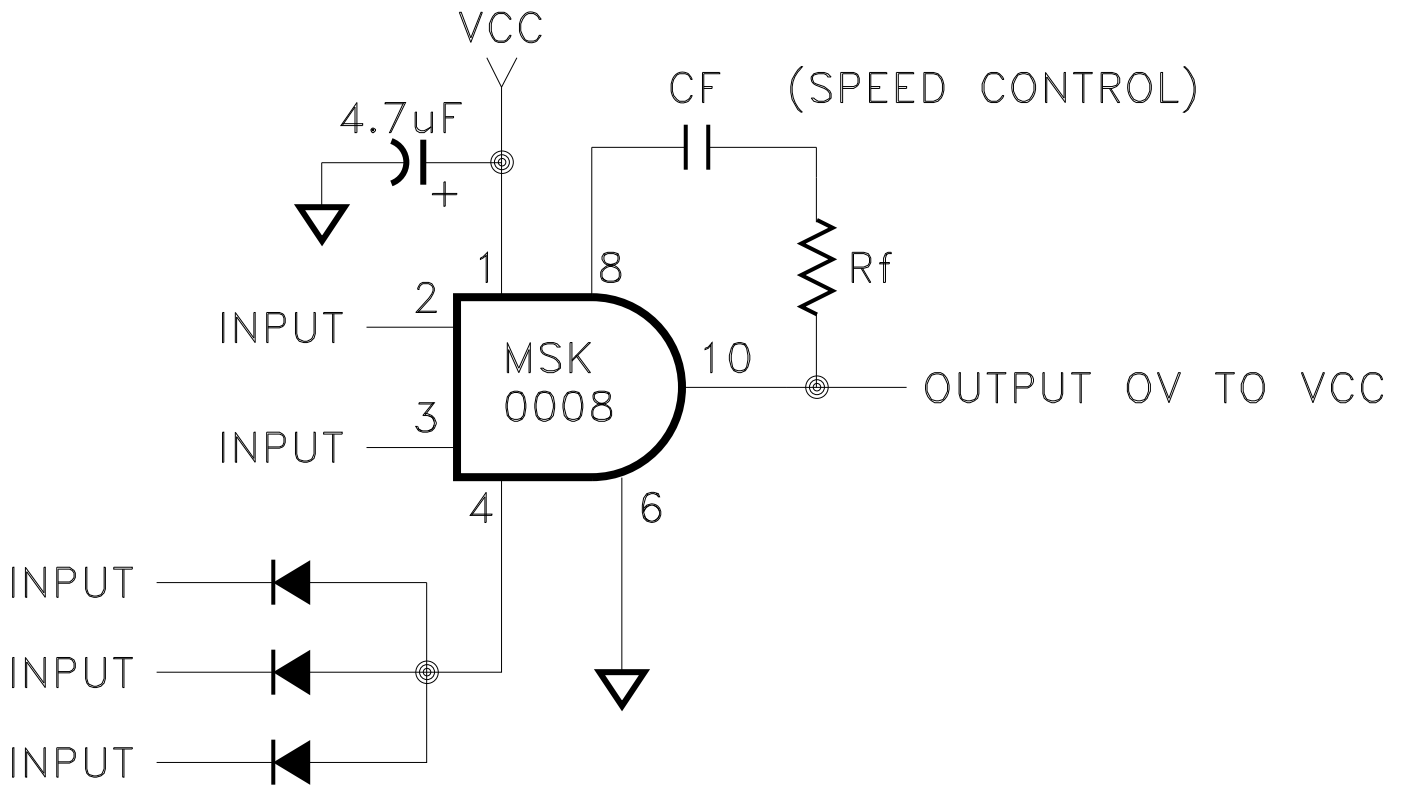
ELECTRICAL SPECIFICATIONS

Parameter	Test Conditions ①	Group A Subgroup	MSK0008H			MSK0008			Units
			Min.	Typ.	Max.	Min.	Typ.	Max.	
Power Supply Range ②	Continuous	-	10	28	45	10	28	45	V
Logic 1 Input Voltage ② ③	$20V \leq V_{CC} \leq 45V$	1,2,3	2.0	-	5.5	2.0	-	5.5	V
Logic 0 Input Voltage ② ③	$20V \leq V_{CC} \leq 45V$	1,2,3	-	-	0.8	-	-	0.8	V
Logic 1 Output Voltage	$V_{CC} = 20V$ $V_{IN} = 2V$ $R_L = 100\Omega$	1,2,3	13	14	-	13	14	-	V
	$V_{CC} = 28V$ $V_{IN} = 2V$ $R_L = 40\Omega$	1,2,3	26.5	27	-	26	27	-	V
	② $V_{CC} = 45V$ $V_{IN} = 2V$ $I_O = 1.6A$	1,2,3	43	43.5	-	42.5	43.5	-	V
Logic 0 Output Voltage	$V_{IN} = 0.8V$ $R_L = 100\Omega$	1,2,3	-	25	100	-	25	125	mV
Logic 1 Input Current ②	$V_{IN} = 2.4V$	1,2,3	-	1	5	-	1	10	μA
	$V_{IN} = 5.5V$	1,2,3	-	25	100	-	25	150	μA
Logic 0 Input Current ②	$V_{IN} = 0.4V$	1,2,3	-1.0	-	-	-1.1	-	-	mA
Off Supply Current	$V_{IN} = 0V$	1,2,3	-	0.5	2.0	-	0.5	2.2	mA
On Supply Current	$V_{IN} = 2.0V$	1,2,3	-	6	8	-	6	8.5	mA
Rise Time	$V_{CC} = 28V$ $R_L = 40\Omega$	4	-	200	500	-	200	550	nS
Fall Time	$V_{CC} = 28V$ $R_L = 40\Omega$	4	-	3	4.0	-	3	4.2	μS
Turn On Time ② ⑧	$V_{CC} = 28V$ $R_L = 40\Omega$	4	-	0.6	1.0	-	0.6	1.1	μS
Turn Off Time ② ⑧	$V_{CC} = 28V$ $R_L = 40\Omega$	4	-	8	10	-	8	10.2	μS
Thermal Resistance ②	Junction to Case @ $T_C = 125^\circ C$	-	-	25	35	-	25	40	$^\circ C/W$

NOTES:

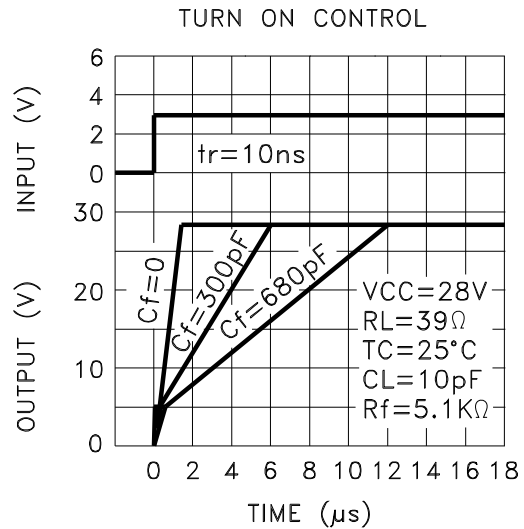
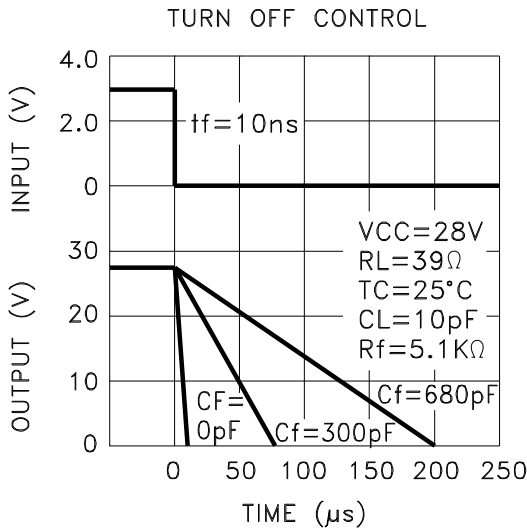
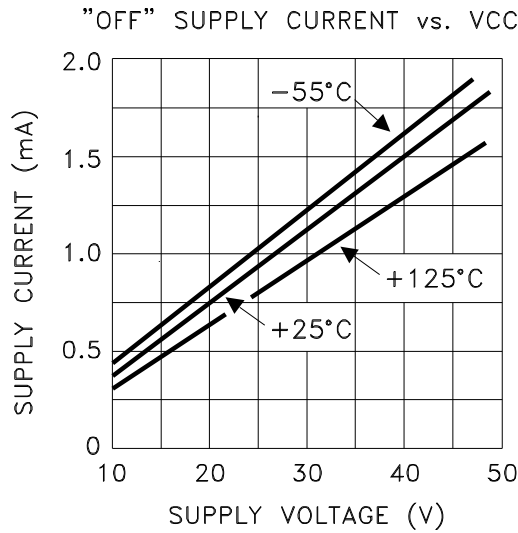
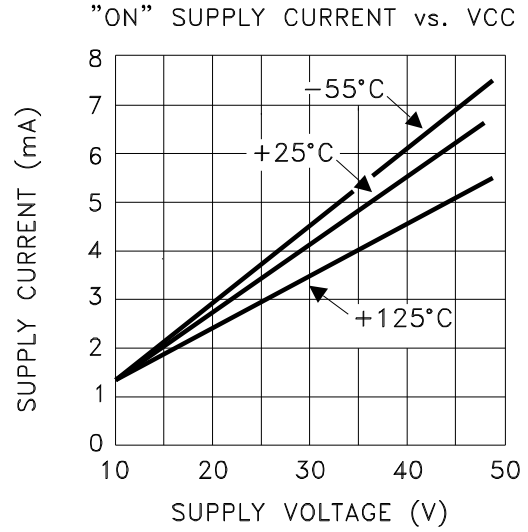
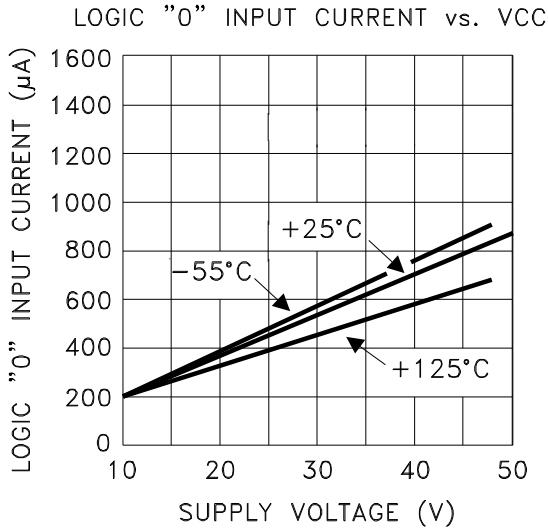
- ① $V_{CC} = 45V$, Cf/Rf = NC and $I_{OUT} = 0mA$ unless otherwise specified.
- ② Guaranteed by design but not tested. Typical parameters are representative of actual device performance at 25°C but are for reference only.
- ③ Logic input levels are verified during logic output voltage test.
- ④ Industrial grade devices shall be tested to subgroups 1 and 4 unless otherwise requested.
- ⑤ Military grade devices ("H" suffix) shall be 100% tested to subgroups 1,2,3 and 4.
- ⑥ Subgroup 5 and 6 testing available upon request.
- ⑦ Subgroup 1,4 $T_C = +25^\circ C$
Subgroup 2,5 $T_C = +125^\circ C$
Subgroup 3,6 $T_A = -55^\circ C$
- ⑧ Measured from 50% of V_{IN} to 90% of V_{OUT} transition.

APPLICATION NOTES

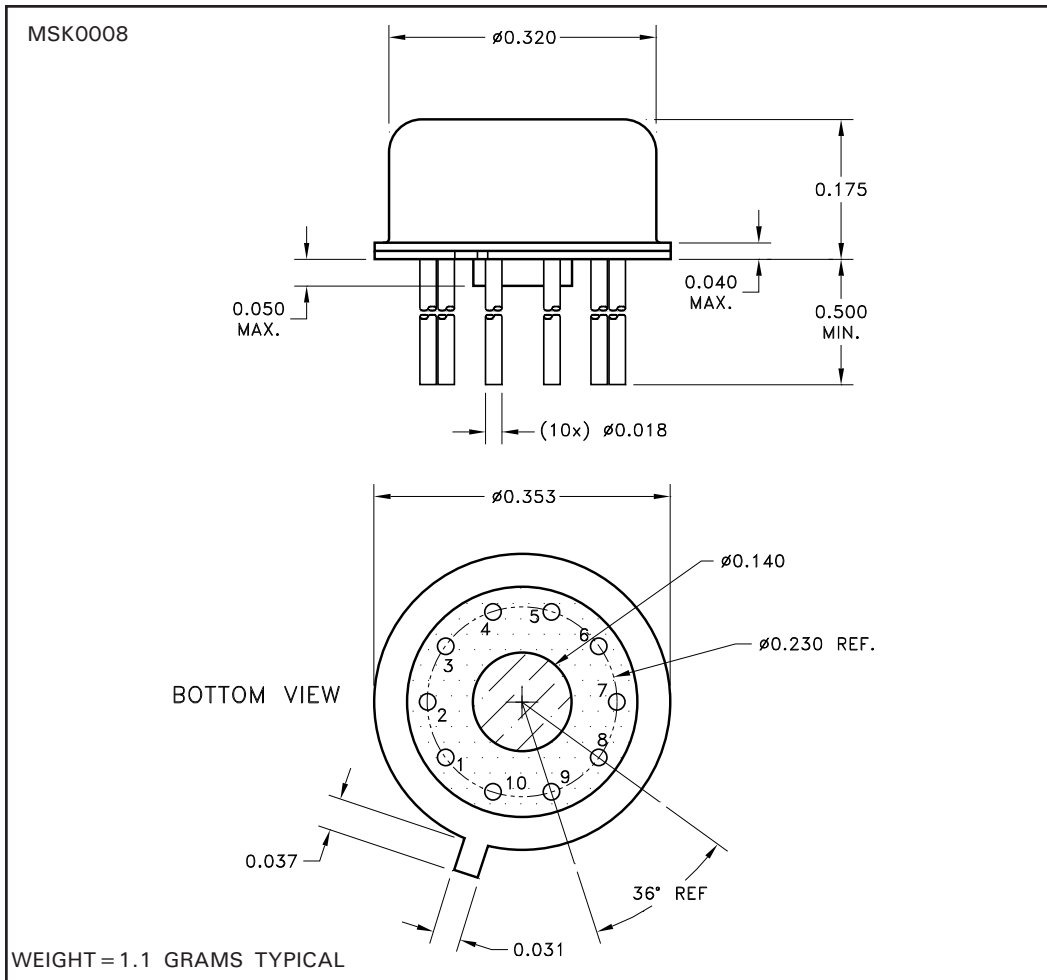


APPLICATION DIAGRAM

TYPICAL PERFORMANCE CURVES



MECHANICAL SPECIFICATIONS



ESD TRIANGLE INDICATES PIN 1.
 ALL DIMENSIONS ARE ± 0.010 INCHES UNLESS OTHERWISE LABELED.

ORDERING INFORMATION

Part Number	Screening Level
MSK0008	Industrial
MSK0008H	Mil-PRF-38534 Class H
5962-8761704X	DSCC-SMD

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