



M.S.KENNEDY CORP.

HIGH LEVEL DIGITAL DRIVER

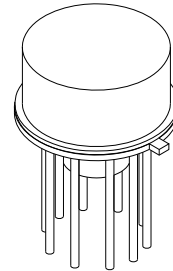
0006

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FEATURES:

- Single Supply Operation From 20V to 45V
- Replaces NH/DH0006
- 'And' Input Logic With Expander
- External Transition Time Control
- Output Current to 400mA
- Available to DSCC SMD 5962-87617

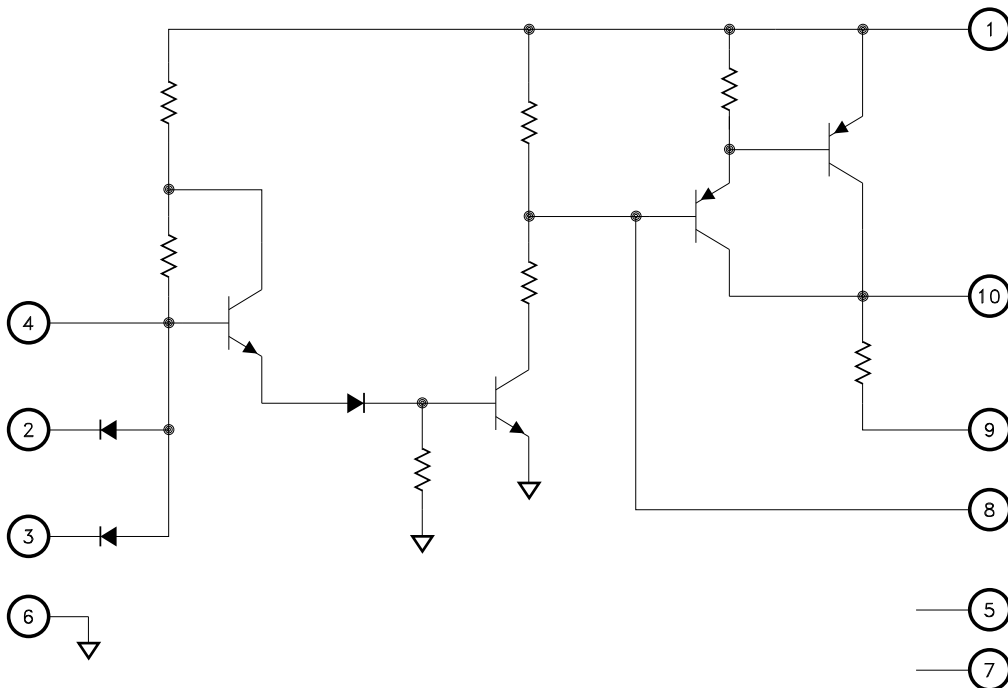


MSK0006

DESCRIPTION:

The MSK 0006 is an integrated high voltage, high current driver designed to accept standard DTL or TTL logic levels and drive a load of up to 400 mA at 28V. AND inputs are provided along with an Expander connection, should additional gating be required. The addition of an external capacitor 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

PIN-OUT INFORMATION

- | | |
|------------|---------------------------|
| 1 Vcc | 10 Output |
| 2 Input | 9 Response Time Control C |
| 3 Input | 8 Response Time Control B |
| 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)	1.5A	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 0006H)	-55°C to +125°C
				(MSK 0006)	-40°C to +85°C
			T_J	Junction Temperature	175°C

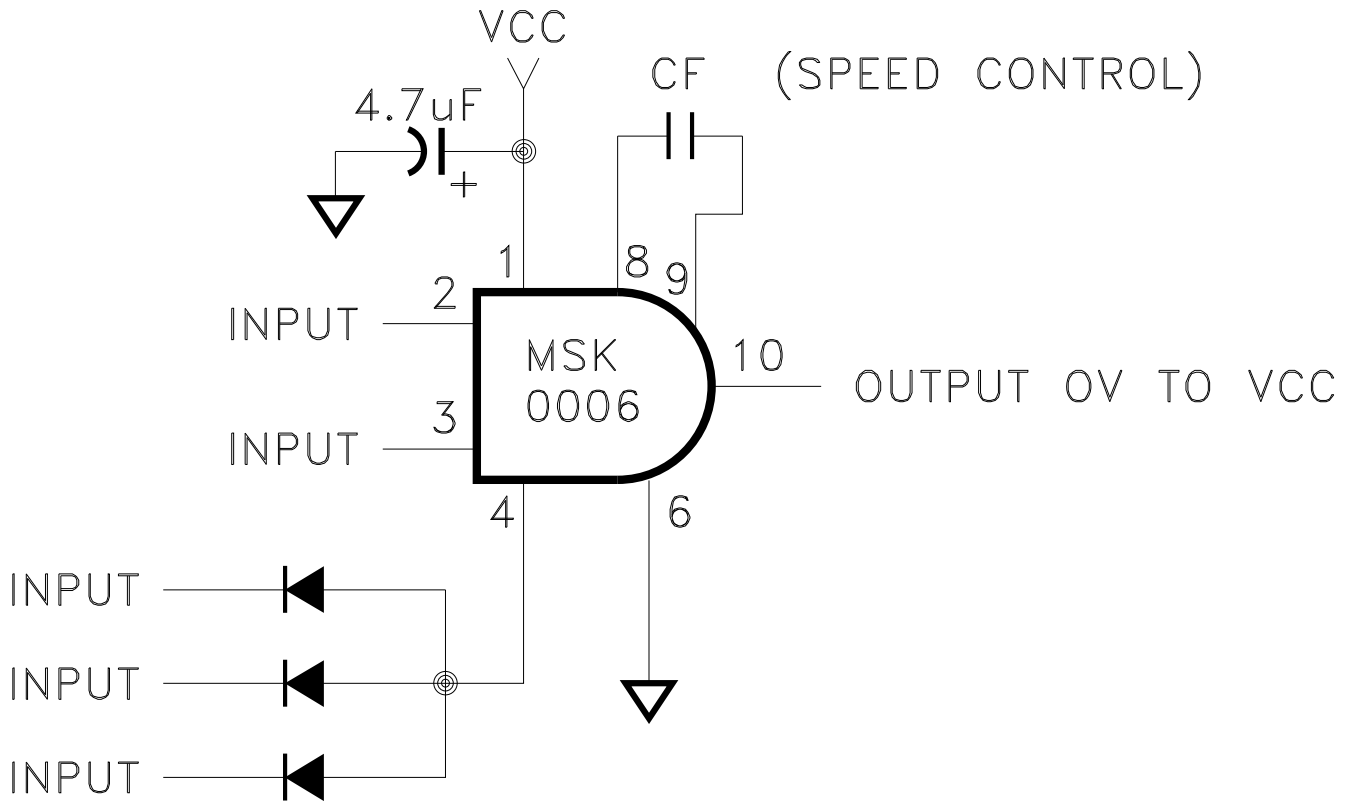
ELECTRICAL SPECIFICATIONS

Parameter	Test Conditions ①	Group A Subgroup	MSK0006H			MSK0006			Units
			Min.	Typ.	Max.	Min.	Typ.	Max.	
Power Supply Range ②	Continuous	-	15	28	45	16	28	45	V
Logic 1 Input Voltage ②	$20V \leq V_{CC} \leq 45V$	1,2,3	2.0	-	5.5	2.0	-	5.5	V
Logic 0 Input Voltage ②	$20V \leq V_{CC} \leq 45V$	1,2,3	-	-	0.8	-	-	0.8	V
Logic 1 Output Voltage	$V_{CC}=28V \quad V_{IN}=2V \quad R_L=82\Omega$	1,2,3	26.5	27	-	26	27	-	V
	$V_{CC}=20V \quad V_{IN}=2V \quad R_L=82\Omega$	1,2	13	19	-	13	19	-	V
	$V_{CC}=20V \quad V_{IN}=2.1V \quad R_L=82\Omega$	3	13	19	-	13	19	-	V
Logic 0 Output Voltage	$V_{IN}=0.8V \quad R_L=100\Omega$	1,2,3	-	5	10	-	5	15	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	$V_{IN}=0.8V$	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	$V_{CC}=28V \quad R_L=82\Omega$	4,5,6	-	100	300	-	100	325	nS
Fall Time	$V_{CC}=28V \quad R_L=82\Omega$	4,5,6	-	0.8	1.7	-	0.8	1.8	μS
Turn On Time ②⑧	$V_{CC}=28V \quad R_L=82\Omega$	4,5,6	-	0.3	1.0	-	0.3	1.1	μS
Turn Off Time ②⑧	$V_{CC}=28V \quad R_L=82\Omega$	4,5,6	-	2.2	8.0	-	2.2	8.2	μS
Thermal Resistance ②	Junction to Case @ $T_C=125^\circ C$	-	-	60	68	-	60	70	$^\circ C/W$

NOTES:

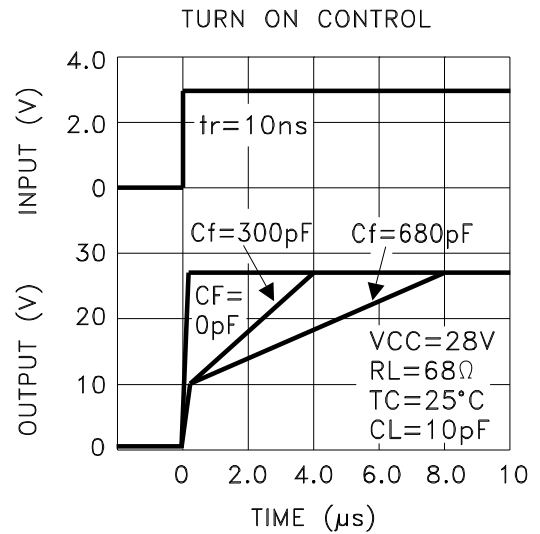
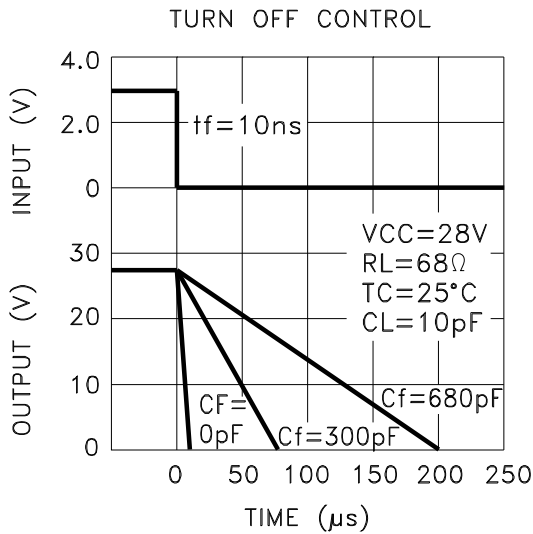
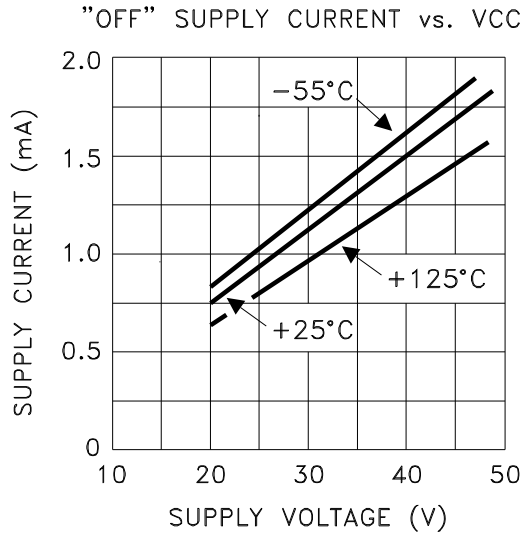
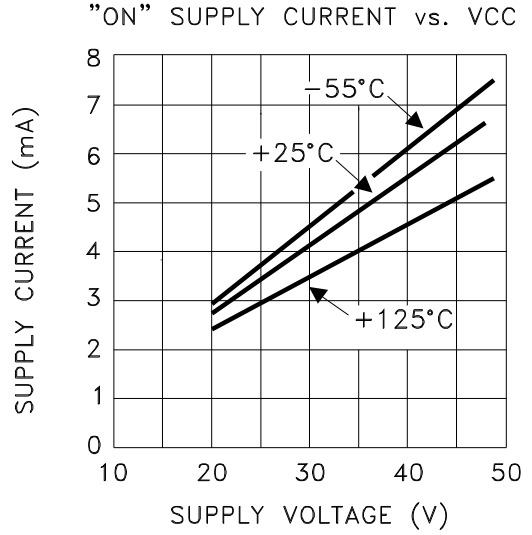
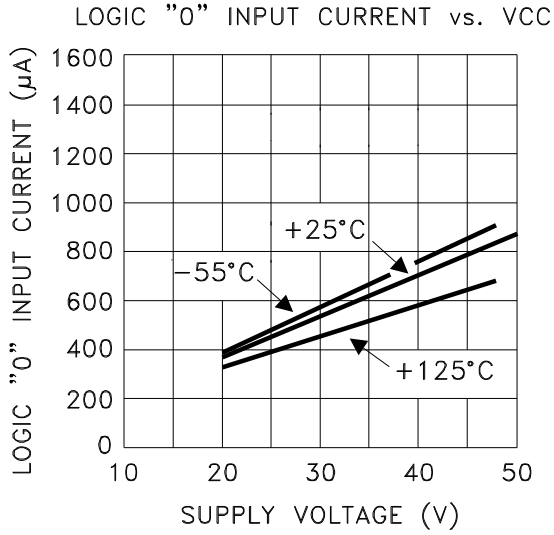
- ① $V_{CC}=45V$, $C_f=NC$ and $I_{OUT}=0mA$ unless otherwise specified.
- ② Guaranteed by design but not tested. Typical parameters are representative of actual device performance but are for reference only.
- ③ Logic input levels are verified during logic output voltage test.
- ④ Industrial grade devices 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

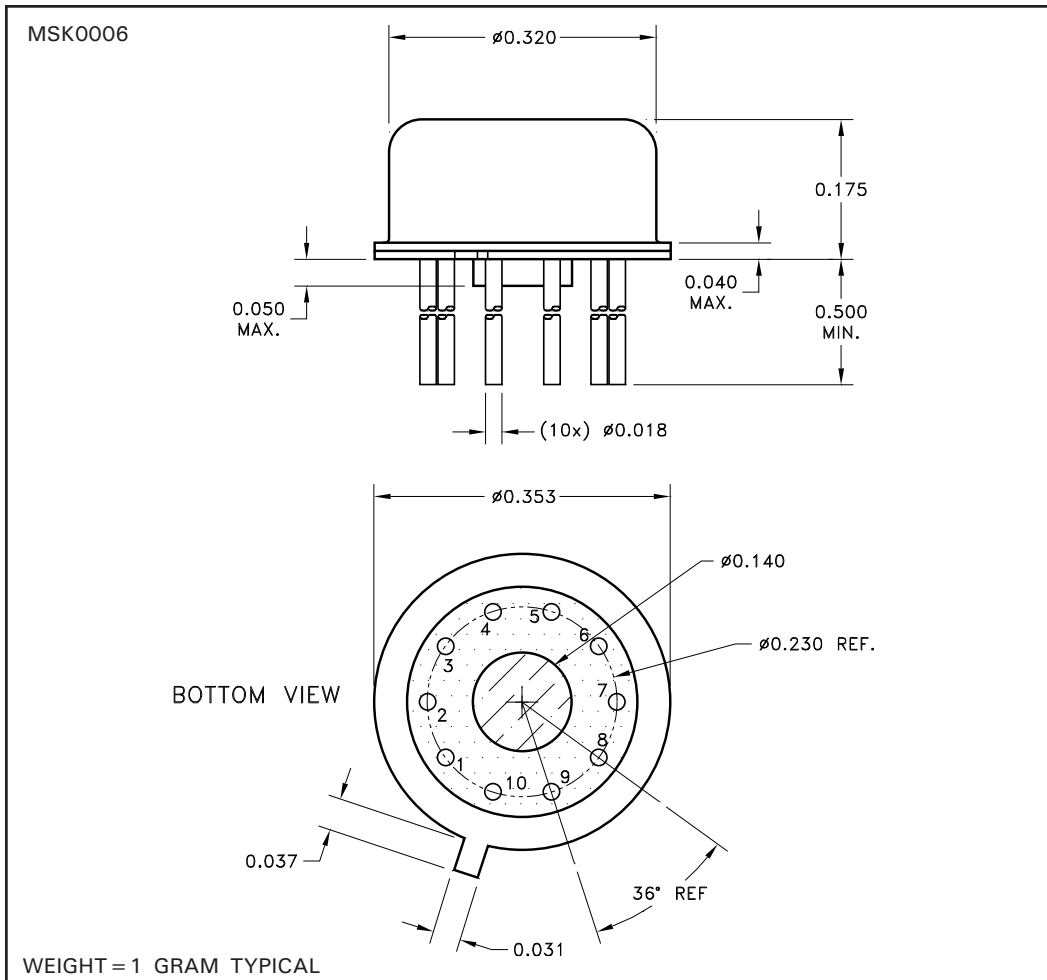


APPLICATION DIAGRAM

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
MSK0006	Industrial
MSK0006H	Mil-PRF-38534 Class H
5962-87617	DSCC-SMD

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