

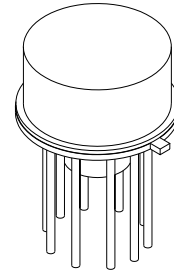


# HIGH LEVEL DIGITAL DRIVER

# 0006

## 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 5962-8761703

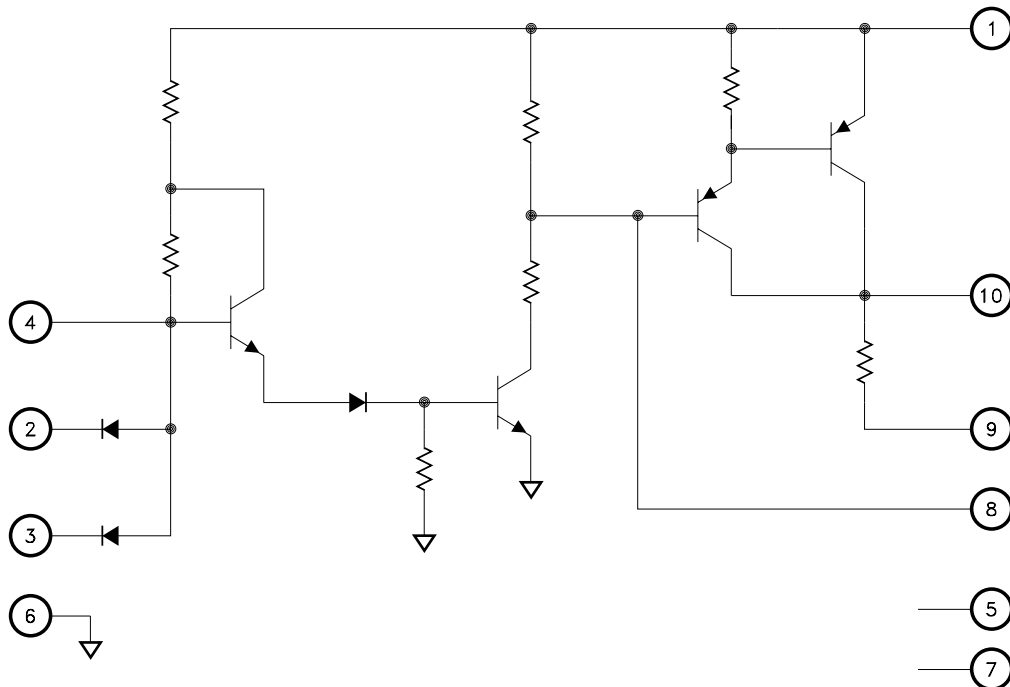


MSK0006

## DESCRIPTION:

The MSK0006 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	6	Output
2	Input	7	Response Time Control C
3	Input	8	Response Time Control B
4	Expander	9	NC
5	NC	10	Ground

## ABSOLUTE MAXIMUM RATINGS

VCC	Supply Voltage (t ≤ 0.1 sec)	60V
IOUT	Output Current (50mS)	1.5A
VIN	Input Voltage	5.5V
IIN	Expander Input Current	5mA

TST	Storage Temperature Range	-65°C to +150°C
TLD	Lead Temperature Range (10 Seconds)	300°C
Tc	Case Operating Temperature Range (MSK0006H)	-55°C to +125°C
	(MSK0006)	-40°C to +85°C
TJ	Junction Temperature	+175°C

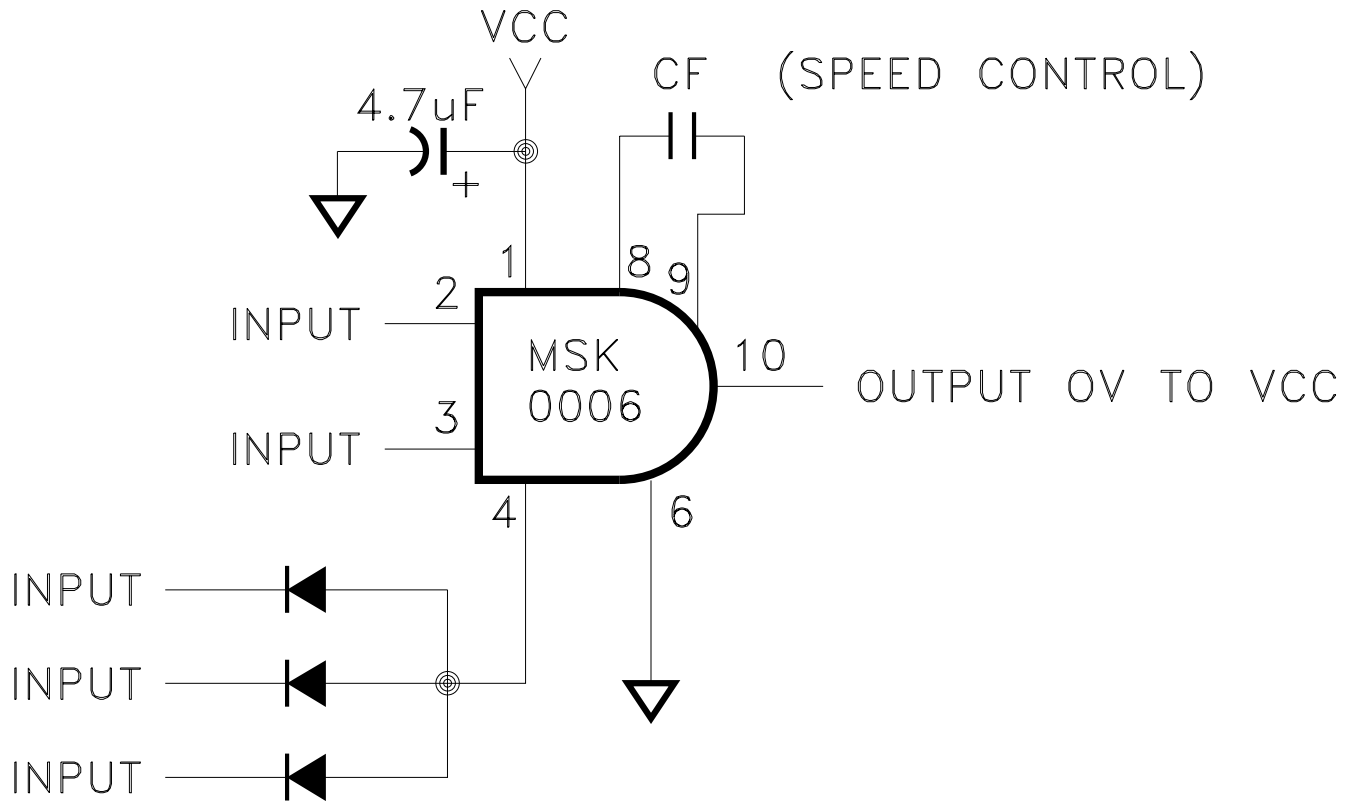
## ELECTRICAL SPECIFICATIONS

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 ≤ VCC ≤ 45V	1,2,3	2.0	-	5.5	2.0	-	5.5	V
Logic 0 Input Voltage ②	20V ≤ VCC ≤ 45V	1,2,3	-	-	0.8	-	-	0.8	V
Logic 1 Output Voltage	VCC=28V VIN=2V RL=82Ω	1,2,3	26.5	27	-	26	27	-	V
	VCC=20V VIN=2V RL=82Ω	1, 2	13	19	-	13	19	-	V
	VCC=20V VIN=2.1V RL=82Ω	3	13	19	-	13	19	-	V
Logic 0 Output Voltage	VIN=0.8V RL=100Ω	1,2,3	-	5	10	-	5	15	mA
Logic 1 Input Current ②	VIN=2.4V	1,2,3	-	1	5	-	1	10	μA
	VIN=5.5V	1,2,3	-	25	100	-	25	150	μA
Logic 0 Input Current ②	VIN=0.4V	1,2,3	-1.0	-	-	-1.1	-	-	mA
Off Supply Current	VIN=0.8V	1,2,3	-	0.5	2.0	-	0.5	2.2	mA
On Supply Current	VIN=2.0V	1,2,3	-	6	8	-	6	8.5	mA
Rise Time	VCC=28V RL=82Ω	4,5,6	-	100	300	-	100	325	nS
Fall Time	VCC=28V RL=82Ω	4,5,6	-	0.8	1.7	-	0.8	1.8	μS
Turn On Time ② ⑧	VCC=28V RL=82Ω	4,5,6	-	0.3	1.0	-	0.3	1.1	μS
Turn Off Time ② ⑧	VCC=28V RL=82Ω	4,5,6	-	2.2	8.0	-	2.2	8.2	μS
Thermal Resistance ②	Junction to Case @ TC=125°C	-	-	60	68	-	60	70	°C/W

### NOTES:

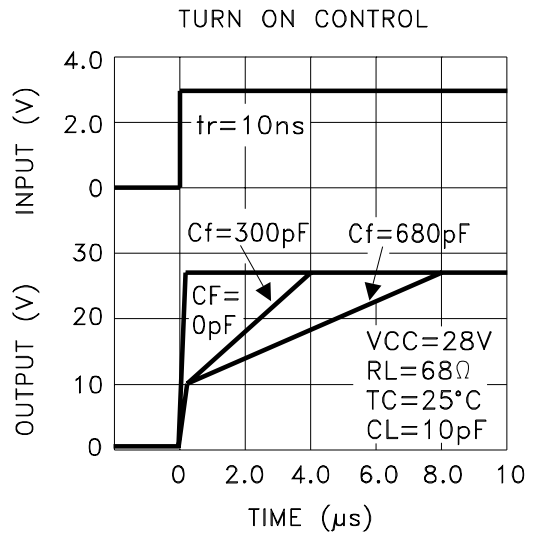
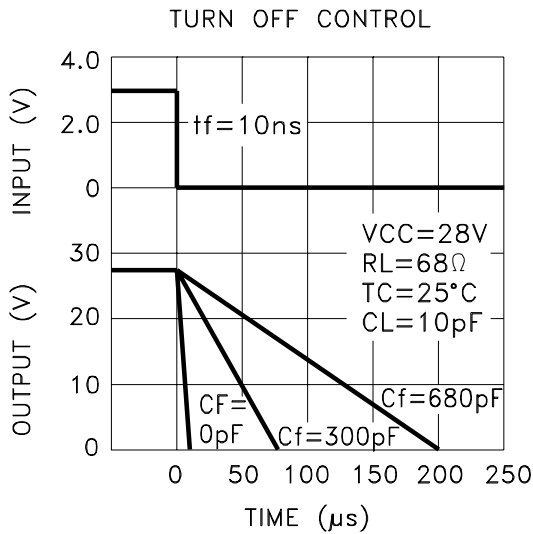
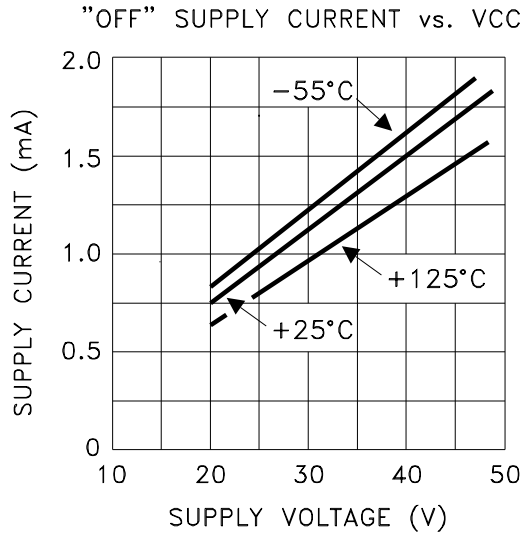
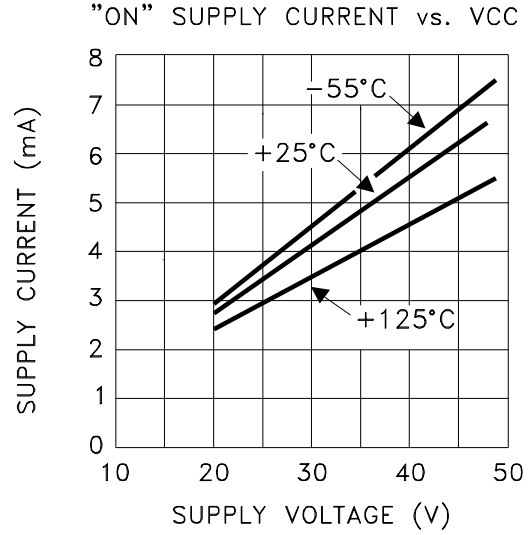
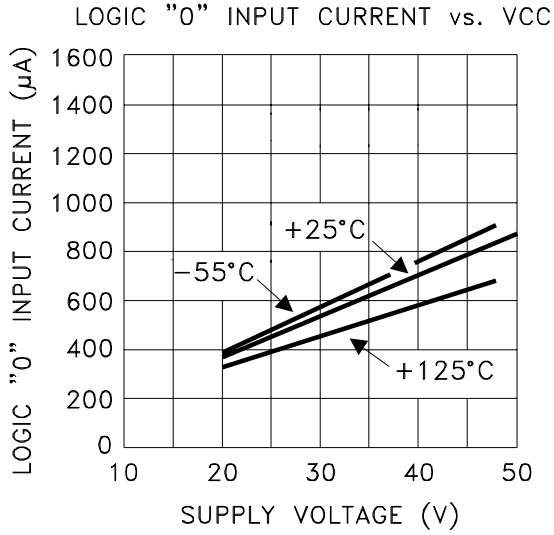
- ① VCC = 45V, Cf = NC and IOUT = 0mA unless otherwise specified.
- ② Guaranteed by design but not tested. Typical parameters are representative of actual device performance but are for reference only.
- ③ Logic input levels are verified during logic output voltage test.
- ④ Industrial grade devices 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	TA = +25°C
2, 5	TA = +125°C
3, 6	TA = -55°C
- ⑧ Measured from 50% of VIN to 90% of VOUT transition.
- ⑨ Internal solder reflow temperature is 180°C, do not exceed.
- ⑩ Reference DLA SMD 5962-8761703 for electrical specifications for devices purchased as such.



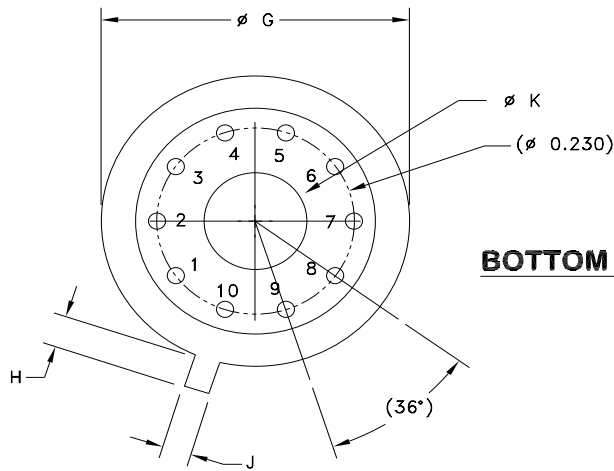
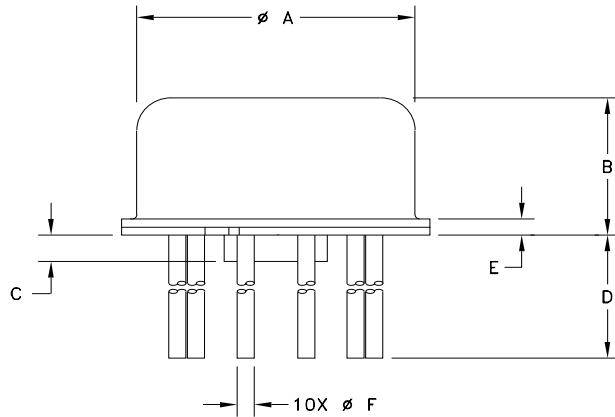
APPLICATION DIAGRAM

# TYPICAL PERFORMANCE CURVES



# MECHANICAL SPECIFICATIONS

MSK0006



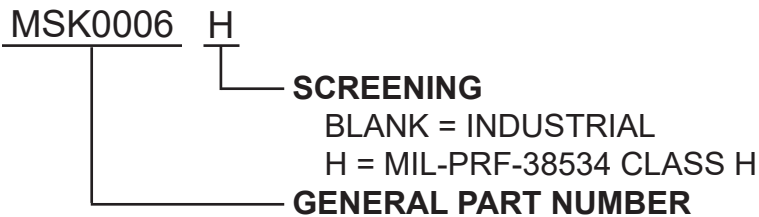
**BOTTOM VIEW**

REF	MIN	MAX
A	0.305	0.335
B	0.165	0.185
C		0.050
D	0.500	
E		0.040
F	0.016	0.019
G	0.335	0.370
H	0.029	0.045
J	0.028	0.034
K	0.120	0.160

WEIGHT = 1 GRAM TYPICAL

ALL DIMENSIONS ARE SPECIFIED IN INCHES.

## ORDERING INFORMATION



NOTE: See DSCC SMD 5962-8761703 for DLA part number options.

## REVISION HISTORY

REV	STATUS	DATE	DESCRIPTION
E	Released	06/17	Clarify that we offer 03 SMD version and update format
F	Released	09/21	Remove MIL-PRF-38535

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Contact TTM for MIL-PRF-38534 qualification status.