



M.S.KENNEDY CORP.

# RAD HARD QUAD HIGH SIDE DRIVER

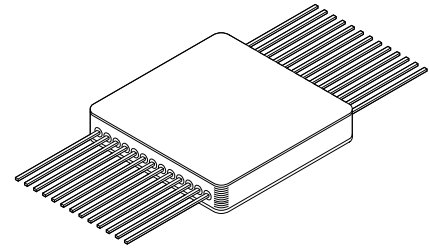
# 1755

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(315) 701-6751

**FEATURES:**

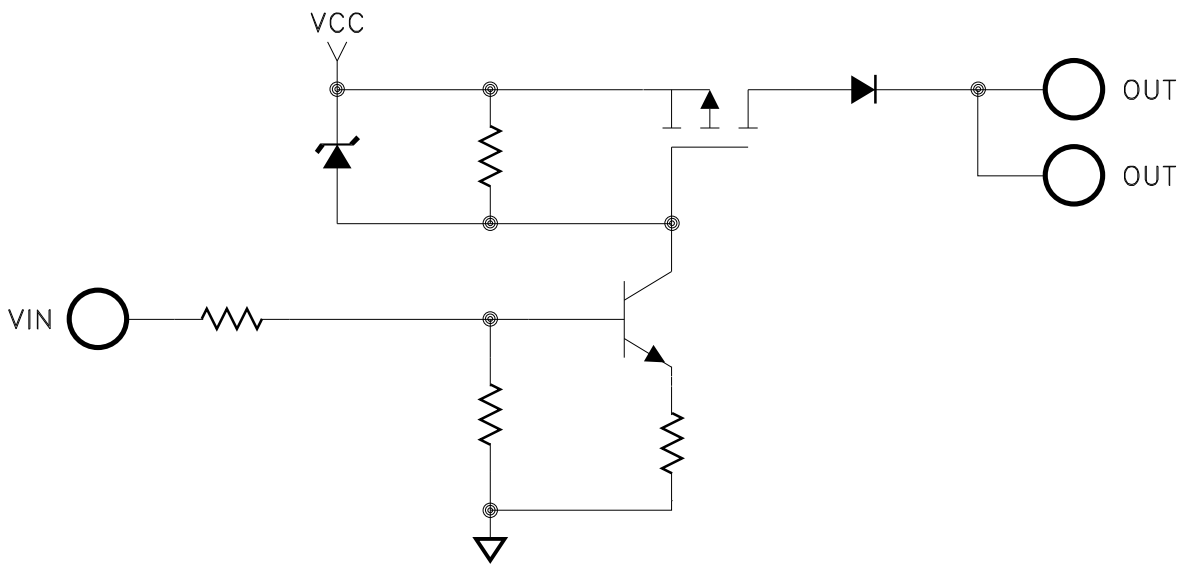
- RAD HARD MOSFETs
- Quad Configuration
- Available Fully Screened to MIL-PRF-38534
- Surface Mount Flatpack
- Low Profile
- 100V/2A Max. Ratings for Switches
- Series Diode for Each Output



**DESCRIPTION:**

The MSK 1755 is a radiation hardened quad high side driver module. The device is designed for space applications where quality, performance and low weight are a must. The MSK 1755 is packaged in a hermetic 26 pin flatpack.

**EQUIVALENT SCHEMATIC**



ONE OF FOUR CELLS SHOWN

**TYPICAL APPLICATIONS**

- High Side Switch Drivers
- High Level Switching
- Space Applications

**PIN-OUT INFORMATION**

1	VCC	26	OUT1
2	VCC	25	OUT1
3	VCC	24	VCC
4	VCC	23	VCC
5	VCC	22	OUT2
6	VIN1	21	OUT2
7	GND	20	VCC
8	VIN2	19	VCC
9	GND	18	OUT3
10	VIN3	17	OUT3
11	GND	16	VCC
12	VIN4	15	OUT4
13	GND	14	OUT4

## ABSOLUTE MAXIMUM RATINGS <sup>④</sup>

VCC	Positive Supply Voltage . . . . .	+35V
TJ	Junction Temperature . . . . .	150°C
VIN	Input Voltage . . . . .	6.0V
VOUT	Output Voltage . . . . .	VCC
	Output Breakdown Voltage (VCC-VOUT) . . . . .	100V

Tc	Operating Temperature Range . . . . .	-55°C to +125°C
	Storage Temperature Range . . . . .	-55°C to +150°C
	Lead Temperature (Soldering, 10 Seconds) . . . . .	265°C
	Output Current . . . . .	2A <sub>Peak</sub>

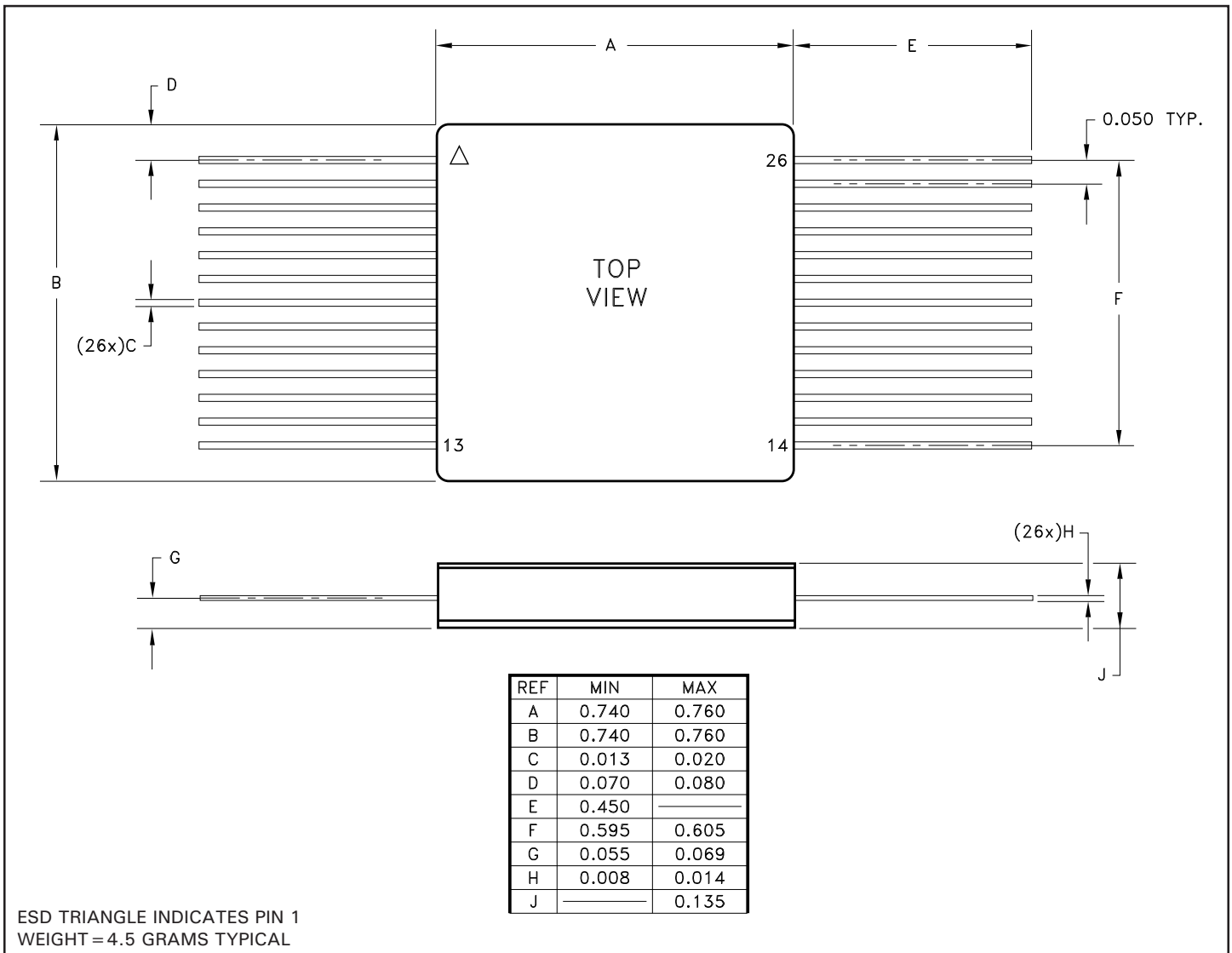
## ELECTRICAL SPECIFICATIONS

Parameter	Test Conditions <sup>①</sup>	Group A Subgroup	Min.	Typ.	Max.	Units	
Supply Current	VIN = N/C RL = N/C	1	-	-	250	µA	
		2,3	-	-	0.5	mA	
Output Voltage (Off)	ALL (4) OUTPUTS WRT +VCC RL = 10K Ω	1,2,3	29.0	-	-	V	
Output Voltage (On)	ALL (4) OUTPUTS WRT +VCC	RL = 64Ω	1	-	-	0.7	V
			2,3	-	-	0.9	V
		RL = 32Ω	1	-	-	0.9	V
			2,3	-	-	1.1	V
		RL = 16Ω	1	-	-	1.4	V
			2,3	-	-	1.6	V
Output Voltage Delta (On)	ALL (4) OUTPUTS WRT +VCC RL = 64Ω	1	-	-	0.2	V	
Output Delay Times	ALL (4) OUTPUTS RL = ALL (3) LOAD CONDITIONS MEASURED @ 50% POINTS OF INPUT AND OUTPUT	TON	4	-	-	50	µS
		TOFF	4	-	-	100	µS
Input Voltage (Logic 1) <sup>②</sup>		1	4.0	-	-	V	
Input Voltage (Logic 0) <sup>②</sup>		1	-	-	0.6	V	
Input Current <sup>②</sup>		1	-	-	300	µA	
Supply Current <sup>②</sup>	VCC = +31.5V (±0.5V) VIN = +4.1V (±0.1V) RL = ALL (3) LOAD CONDITIONS (OUTPUT UNDER TEST) RL = ALL 3 LOAD CONDITIONS (ALL OTHER OUTPUTS)	1	-	-	5	mA	
Output Current <sup>②</sup>	VCC = +31.5V (±0.5V) VIN = +4.1V (±0.1V) RL = ALL (3) LOAD CONDITIONS (OUTPUT UNDER TEST) RL = ALL 3 LOAD CONDITIONS (ALL OTHER OUTPUTS)	1	1.8	-	-	A <sub>Peak</sub>	

### NOTES:

- ① Unless otherwise specified the following test conditions shall apply: +VCC = +31.5V, +VH = +4.1V, +VL = +1V.
- ② Parameter, if not tested shall be guaranteed to the specified limits in table 1.
- ③ Subgroup 1,4      TA = TC = +25°C  
Subgroup 2,5      TA = TC = +125°C  
Subgroup 3,6      TA = TC = -55°C
- ④ Continuous operation at or above absolute maximum ratings may adversely effect the device performance and/or life cycle.

## MECHANICAL SPECIFICATIONS



## ORDERING INFORMATION

Part Number	Screening Level
MSK1755	Industrial
MSK1755H	MIL-PRF-38534 Class H
MSK1755K	MIL-PRF-38534 Class K

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