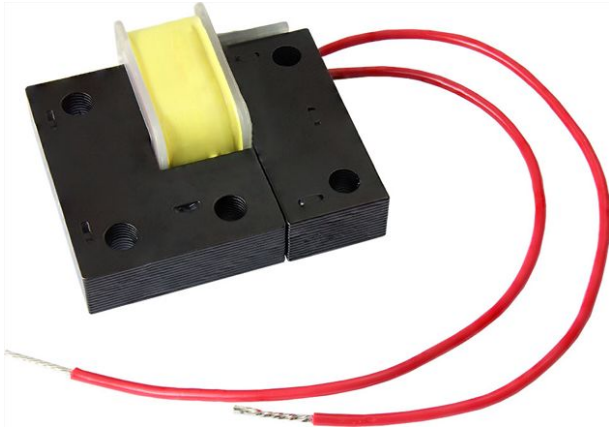


## Haptic Feedback Actuator



### FEATURES

- Solenoid construction provides high impulse vibration for clear tactile feedback in noisy environments
- This IHPT device can drive up to a 0.5 kg load to 6 *g*'s of acceleration with a 12 V, 5 ms pulse using Vishay's spring return test fixture
- Standard lead termination is dipped 100 % tin solder; customer specific connectors available upon request
- Compact, two piece construction with mounting holes; stationary "U" core and moving "I-bar" for easy implementation in touch screen or touch button application
- AEC-Q200 qualified
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)

AUTOMOTIVE GRADE


**RoHS**  
COMPLIANT

 HALOGEN  
**FREE**
**GREEN**  
(5-2008)

### LINKS TO ADDITIONAL RESOURCES



### APPLICATIONS

- Automotive dashboards, touch screens, and center consoles
- Physical feedback for electronic shift transmissions, steering wheels, seats, control panels
- Touch screens for human-machine interfaces

### STANDARD ELECTRICAL SPECIFICATIONS

| PART NUMBER        | FORCE COEFFICIENT <sup>(1)</sup> | RESPONSE TIME TYP. (ms) | L <sub>0</sub> INDUCTANCE ± 20 % AT 1 kHz, 0.25 V, 0 A (mH) | DCR TYP. (Ω) | DCR MAX. (Ω) | DIELECTRIC WITHSTAND VOLTAGE COIL TO CORE (V <sub>DC</sub> ) |
|--------------------|----------------------------------|-------------------------|---|--------------|--------------|--|
| IHPT1411AFEBR73ABA | 0.73                             | 5.0                     | 1.8   | 0.95         | 1.09         | 150  |

#### Notes

- All specifications are referenced to 25 °C ambient, and assume a 0.75 mm (0.030") gap
- Operating temperature range -40 °C to +105 °C
- The part temperature (ambient + temp. rise) should not exceed 105 °C under worst case operating conditions. Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application
- Rated voltage: 16 V maximum

<sup>(1)</sup> Applied force, in newtons, can be estimated by the following equation:  $F = \text{FORCE COEFFICIENT} \times I_{PK}^2$

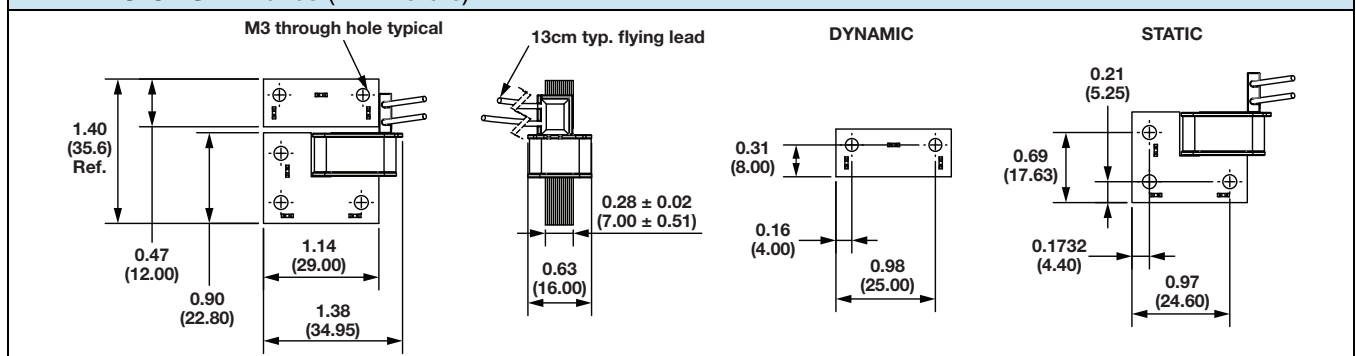
### MATERIAL

|        |                         |
|--------|-------------------------|
| Core   | Laminated steel         |
| Wire   | Copper, PU/PA insulated |
| Solder | Hot dip tin             |

### SOLDER COMPOSITION

|    |        |
|----|--------|
| Sn | 99.3 % |
| Cu | 0.7 %  |

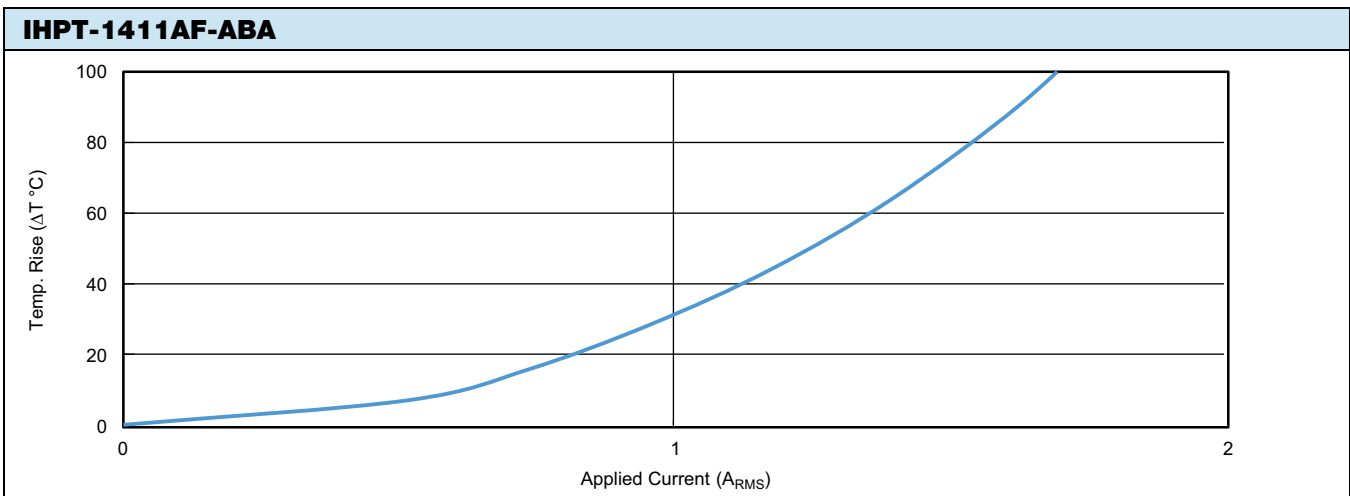
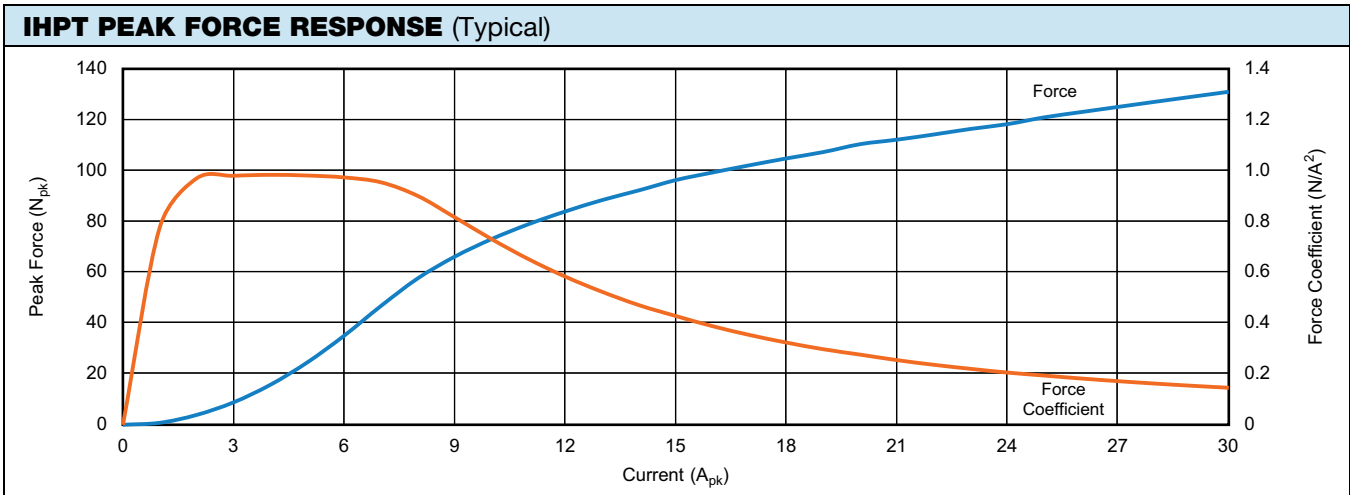
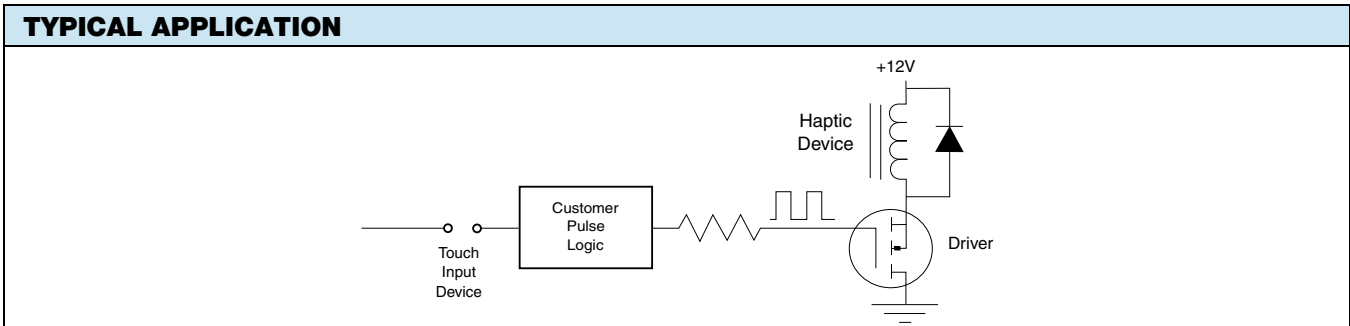
### DIMENSIONS in inches (millimeters)





| DESCRIPTION            |                   |              |                                |
|------------------------|-------------------|--------------|--------------------------------|
| <b>IHPT-1411AF-ABA</b> | <b>R73</b>        | <b>EB</b>    | <b>e3</b>                      |
| MODEL                  | FORCE COEFFICIENT | PACKAGE CODE | JEDEC® LEAD (Pb)-FREE STANDARD |

| GLOBAL PART NUMBER |   |   |   |      |   |   |   |              |   |                   |   |   |        |   |   |   |   |
|--------------------|---|---|---|------|---|---|---|--------------|---|-------------------|---|---|--------|---|---|---|---|
| I                  | H | P | T | 1    | 4 | 1 | 1 | A            | F | E                 | B | R | 7      | 3 | A | B | A |
| MODEL              |   |   |   | SIZE |   |   |   | PACKAGE CODE |   | FORCE COEFFICIENT |   |   | SERIES |   |   |   |   |





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