IHPT-1411AF-AB0 Customizable Haptic Feedback Actuator Offers High Force Density, Compact Size for Touchscreens, Simulators, Switch Panels, and Joysticks

Product Benefits:
- Delivers high impulse pulse and vibration capability for clear tactile feedback in noisy environments or anywhere a mechanical response to action is desired
- Compact, two-piece construction with mounting holes for easy installation and direct application of force
- Operating temperature range to +105 °C for rugged environments
- Fast response time of < 5 ms can be varied to produce multiple haptic effects with a nominal operating voltage of 12 V, up to 16 V
- Simple bobbin and core components allow designers to lay out a spring and housing that is incorporated into the display mounting, eliminating the need for additional housing
- Standard lead terminations are dipped in 100 % tin solder
- Vishay can customize the device’s mounting orientation, termination types, and performance to any design’s specifications
- RoHS-compliant, halogen-free, and Vishay Green

Market Applications:
- Industrial appliances utilizing LCD display panels or touch switches, building and factory automation and control systems, and electronic point of sale (POS) systems; medical monitoring, diagnostic, and surgical equipment; handheld radios; game or simulation controllers; and barcode scanners

The News:
Vishay Intertechnology introduces a new customizable haptic feedback actuator for touchscreens, joysticks, and touch switches in commercial applications.
- The IHPT-1411AF-AB0 is an electromagnetic device that converts electrical energy into a mechanical pulse or vibration for touch-based interaction that can be varied by power amplitude and duty cycle of the input voltage
- The haptic coil assembly, when energized by a DC voltage pulse, creates a magnetic field that attracts the mounted dynamic core piece. When deenergized, the core piece is returned back to its original position by the customer-provided spring assembly
- By eliminating the need for additional housing, the IHPT-1411AF-AB0 enables lower costs, a reduced component height, and higher force density than competing technologies, including linear resonant, linear wideband, eccentric rotating mass, and piezo actuators
- The device can drive a 0.5 kg load to 6 g of acceleration with a 12 V, 5 ms pulse; competing technologies can only drive 0.1 kg to 0.2 kg to this level
The Key Specifications:

- Nominal operating voltage: 12 V
- Maximum operating voltage: 16 V
- Operating temperature range: -40 °C to +105 °C
- Typical response time: 5.0 ms
- Inductance at 1 kHz, 0.25 V, 0 A: 1.8 mH
- Typical DCR: 0.95 Ω
- Max. DCR: 1.09 Ω
- Coil to core dielectric withstand voltage: 150 Vdc

Availability:
Samples and production quantities of the new haptic feedback actuator are available now, with lead times of 12 weeks.

To access the product datasheet on the Vishay Website, go to http://www.vishay.com/ppg?34545 (IHPT-1411AF-AB0)

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