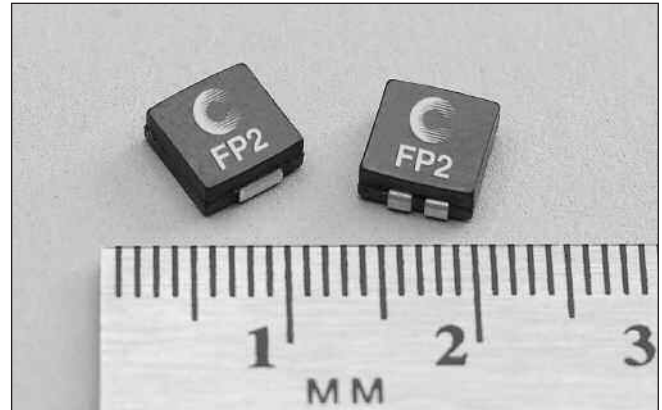


### Description

- 125°C maximum total temperature operation
- Surface mount inductors designed for higher speed switch mode applications requiring lower inductance and high current
- Dual conductors allow for low inductance and high current or high inductance and lower current
- Inductance range from .047uH to 0.480uH
- Current range up to 42 Amps
- Meets UL 94V-0 flammability standard
- Ferrite core material



### Applications

- Next generation microprocessors

### Environmental Data

- Storage temperature range: -40°C to +125°C
- Operating ambient temperature range: -40°C to +125°C (range is application specific).
- Solder reflow temperature: +260°C max. for 10 seconds max.

### Packaging

- Supplied in tape and reel packaging, 1700 (FP2-S and FP2-D) and 950 (FP2-S200 and FP2-VXXX) per reel

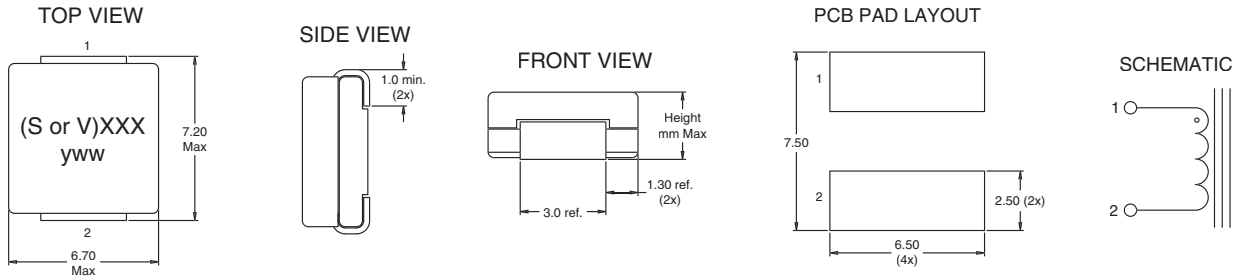
Parallel Mode							
Part Number	Inductance $\mu\text{H}$ (rated)	OCL <sup>(1)</sup> $\mu\text{H} \pm 15\%$	I <sub>RMS</sub> <sup>(2)</sup> Amps	I <sub>SAT</sub> <sup>(3)</sup> Amps	DCR <sup>(4)</sup> $\Omega$ nom.	Height	Volt- $\mu\text{Sec}$ (V $\mu\text{S}$ ) ref. <sup>(5)</sup>
<b>Single Conductor</b>							
FP2-S047-R	0.047	0.047	39.0	42.0	0.00024	3.00	0.75
FP2-S068-R	0.068	0.068	39.0	32.0	0.00024	3.00	0.75
FP2-S082-R	0.082	0.082	39.0	26.0	0.00024	3.00	0.75
FP2-S100-R	0.100	0.100	39.0	22.0	0.00024	3.00	0.75
FP2-S120-R	0.120	0.120	39.0	18.0	0.00024	3.00	0.75
FP2-S200-R	0.200	0.200	37.0	19.0	0.00028	5.00	0.99
FP2-V050-R	0.050	0.050	37.0	70.0	0.00028	5.00	0.99
FP2-V100-R	0.100	0.100	37.0	40.0	0.00028	5.00	0.99
FP2-V120-R	0.120	0.120	37.0	33.0	0.00028	5.00	0.99
FP2-V150-R	0.150	0.150	37.0	25.5	0.00028	5.00	0.99
<b>Double Conductor</b>							
FP2-D047-R	0.047	0.047	37.0	42.0	0.00026	3.00	0.75
FP2-D068-R	0.068	0.068	37.0	32.0	0.00026	3.00	0.75
FP2-D082-R	0.082	0.082	37.0	26.0	0.00026	3.00	0.75
FP2-D100-R	0.100	0.100	37.0	22.0	0.00026	3.00	0.75
FP2-D120-R	0.120	0.120	37.0	18.0	0.00026	3.00	0.75
Series Mode							
Part Number	Inductance $\mu\text{H}$ ref. (rated)	OCL <sup>(1)</sup> $\mu\text{H}$ ref.	I <sub>RMS</sub> <sup>(2)</sup> Amps	I <sub>SAT</sub> <sup>(3)</sup> Amps	DCR <sup>(4)</sup> $\Omega$ ref.	Height	Volt- $\mu\text{Sec}$ (V $\mu\text{S}$ ) ref.
<b>Double Conductor</b>							
FP2-D047-R	0.188	0.188	16.0	21.0	0.0013	3.00	1.50
FP2-D068-R	0.272	0.272	16.0	16.0	0.0013	3.00	1.50
FP2-D082-R	0.328	0.328	16.0	13.0	0.0013	3.00	1.50
FP2-D100-R	0.400	0.400	16.0	11.0	0.0013	3.00	1.50
FP2-D120-R	0.480	0.480	16.0	9.0	0.0013	3.00	1.50

**Notes:** (1) Open Circuit Inductance Test Parameters: 1MHz, 0.25V<sub>rms</sub>, 0.0Adc.  
 (2) RMS current for an approximate  $\Delta T$  of 40°C without core loss. It is recommended that the temperature of the part not exceed 125°C.  
 (3) Peak current for approximately 30% rolloff at 20°C.

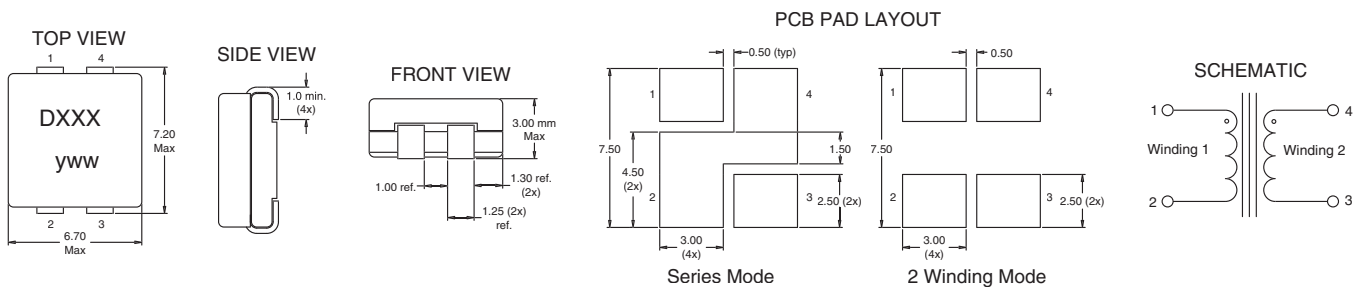
(4) DCR limits 20°C.  
 (5) Applied Volt-Time product (V- $\mu\text{S}$ ) across the inductor. This value represents the applied V- $\mu\text{S}$  at 500kHz necessary to generate a core loss equal to 10% of the total losses for 40°C temperature rise.

### Mechanical Diagrams

#### Single Conductor



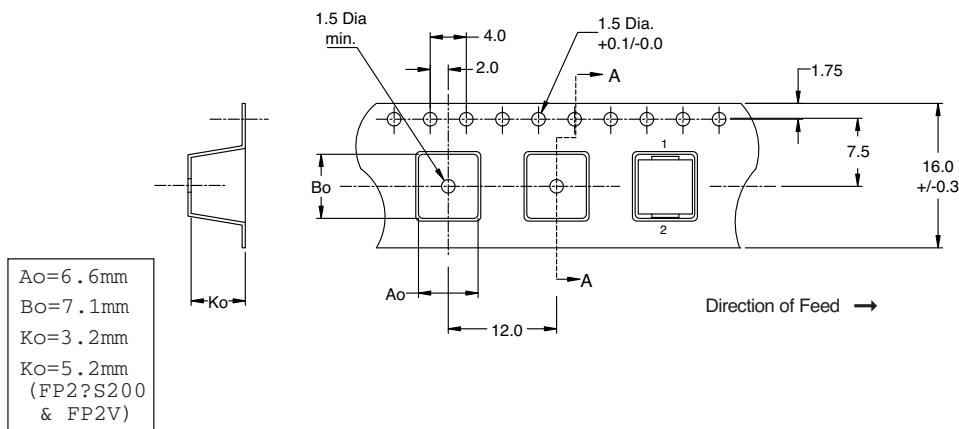
#### Dual Conductor



**Notes:** (1) Marking SXXX = S: Single Conductor Style, DXXX = D: Dual Conductor Style, XXX - last three digits of part number. Date Code: yww = y: Last Digit of year, ww: week of year.  
 (2) All Dimensions are in millimeters unless otherwise specified.

(3) For parallel mode operation, connect terminals 1 to 4 and 2 to 3 on PCB (use Single Conductor PCB Layout) For series mode operation, connect terminals 2 to 4 on PCB (Dual Conductor Model).

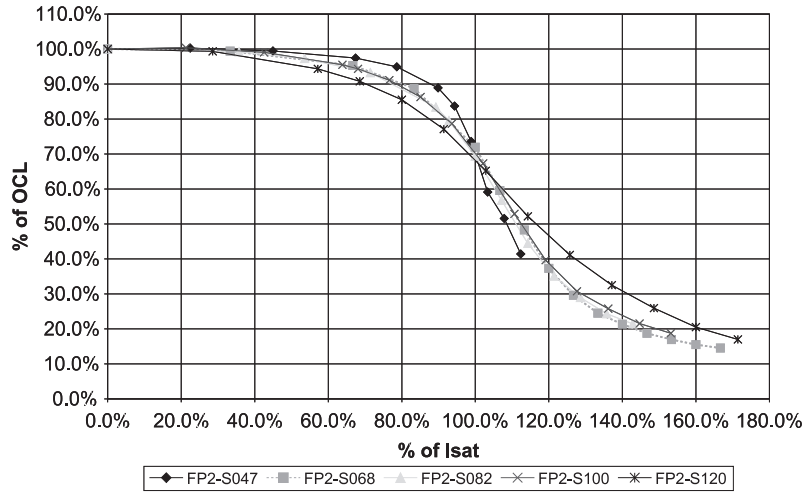
### Packaging Information



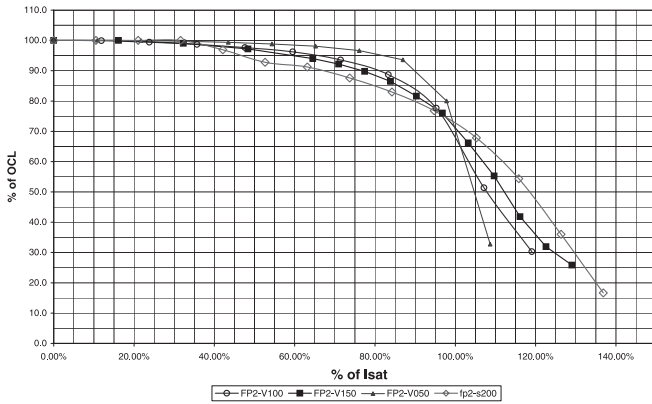
ACTUAL SIZE FLAT-PAC'S

**Inductance  
Characteristics**

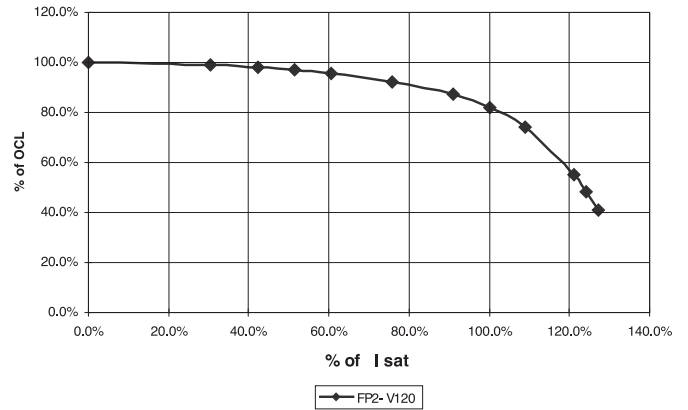
**OCL vs. Isat**



**OCL vs. Isat**

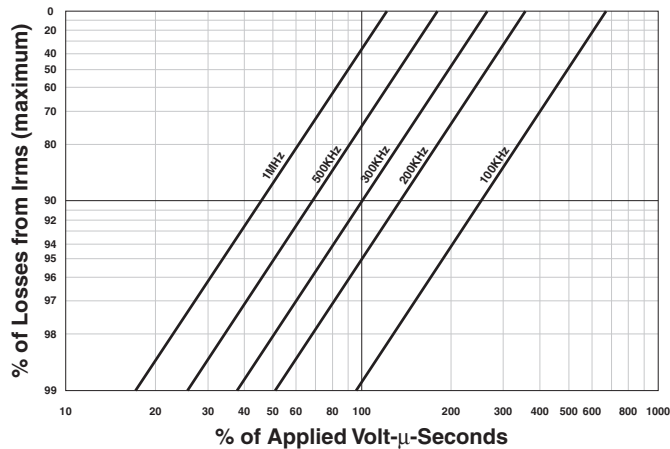


**OCL vs. Isat**



**Core Loss**

**IRMS DERATING WITH CORE LOSS**





**FLAT-PAC™**  
**Low Profile Inductors**  
**(Surface Mount)**

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