

### Description

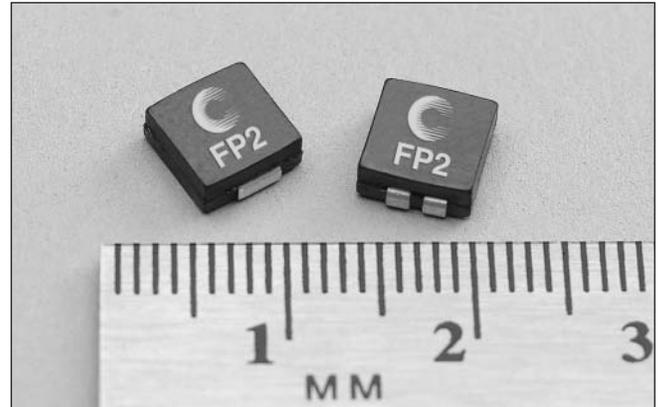
- 125C maximum total temperature operation
- Surface mount inductors designed for higher speed switch mode applications requiring lower inductance and high current
- Dual conductors allow for low inductance and high current or high inductance and lower current
- Inductance range from .047uH to 0.480uH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

### Applications

- Next generation microprocessors

### Environmental Data

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



### Packaging

- Supplied in tape and reel packaging, 1700 (FP2S and FP2D) and 950 (FP2S-200 and FP2V-XXX) per reel

OPTION CODE	
Option Code	Description
-R	RoHS compliant version

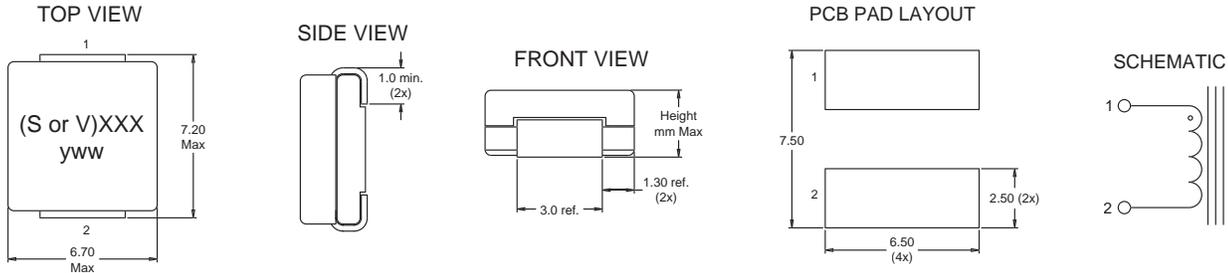
Parallel Mode							
Part Number	Inductance $\mu\text{H}$ (rated)	OCL <sup>(1)</sup> $\mu\text{H} \pm 15\%$	I <sub>RMS</sub> <sup>(2)</sup> Amps	I <sub>SAT</sub> <sup>(3)</sup> Amps	DCR <sup>(4)</sup> $\Omega$ nom.	Height	Volt- $\mu\text{Sec}$ (V $\mu\text{S}$ ) ref. <sup>(5)</sup>
<b>Single Conductor</b>							
FP2-S047	0.047	0.047	39.0	42.0	0.00024	3.00	0.75
FP2-S068	0.068	0.068	39.0	32.0	0.00024	3.00	0.75
FP2-S082	0.082	0.082	39.0	26.0	0.00024	3.00	0.75
FP2-S100	0.100	0.100	39.0	22.0	0.00024	3.00	0.75
FP2-S120	0.120	0.120	39.0	18.0	0.00024	3.00	0.75
FP2-S200	0.200	0.200	37.0	19.0	0.00028	5.00	0.99
FP2-V050	0.050	0.050	37.0	70.0	0.00028	5.00	0.99
FP2-V100	0.100	0.100	37.0	30.0	0.00028	5.00	0.99
FP2-V150	0.150	0.150	37.0	25.5	0.00028	5.00	0.99
<b>Double Conductor</b>							
FP2-D047	0.047	0.047	37.0	42.0	0.00026	3.00	0.75
FP2-D068	0.068	0.068	37.0	32.0	0.00026	3.00	0.75
FP2-D082	0.082	0.082	37.0	26.0	0.00026	3.00	0.75
FP2-D100	0.100	0.100	37.0	22.0	0.00026	3.00	0.75
FP2-D120	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	0.188	0.188	16.0	21.0	0.0013	3.00	1.50
FP2-D068	0.272	0.272	16.0	16.0	0.0013	3.00	1.50
FP2-D082	0.328	0.328	16.0	13.0	0.0013	3.00	1.50
FP2-D100	0.400	0.400	16.0	11.0	0.0013	3.00	1.50
FP2-D120	0.480	0.480	16.0	9.0	0.0013	3.00	1.50

**Notes:** (1) Open Circuit Inductance Test Parameters: 1MHz, .100Vrms, 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.

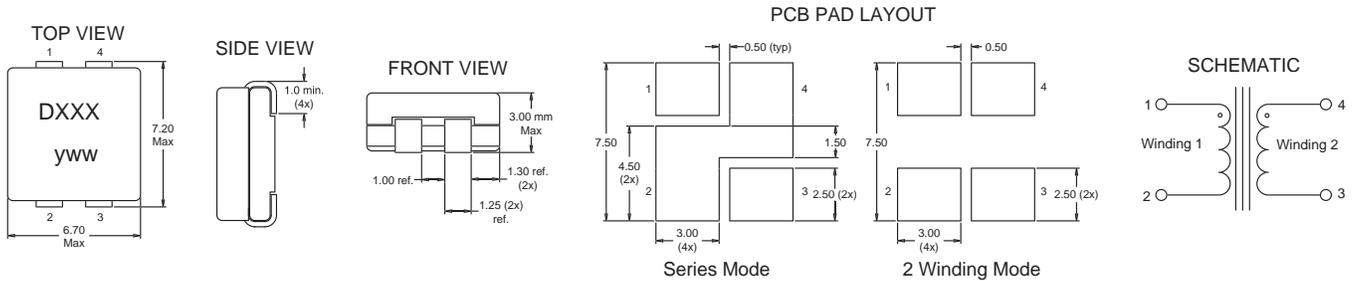
(4) DCR limits 20°C.  
 (5) Applied Volt-Time product (V- $\mu\text{S}$ ) across the inductor. This value represents the applied V- $\mu\text{S}$  at 500KHz necessary to generate a core loss equal to 10% of the total losses for 40°C temperature rise.

**Mechanical Diagrams**

Single Conductor



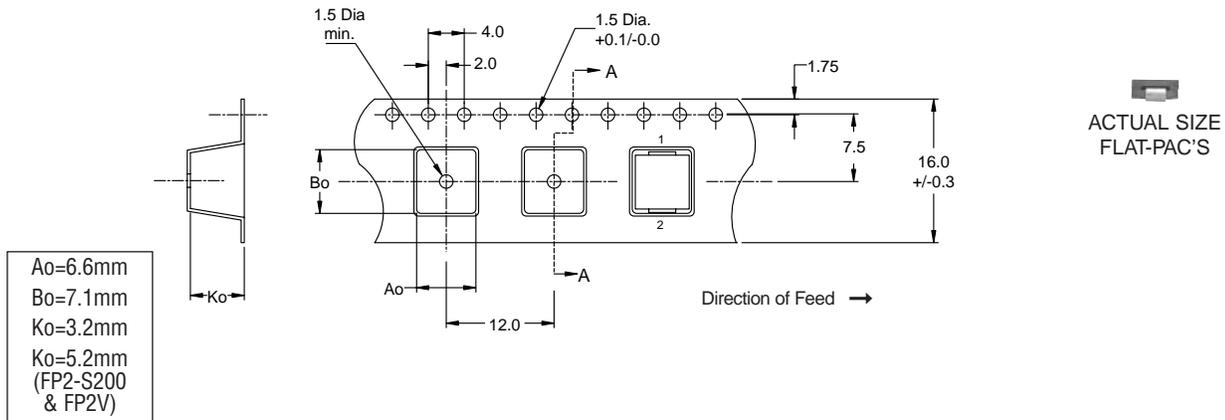
Dual Conductor



**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.

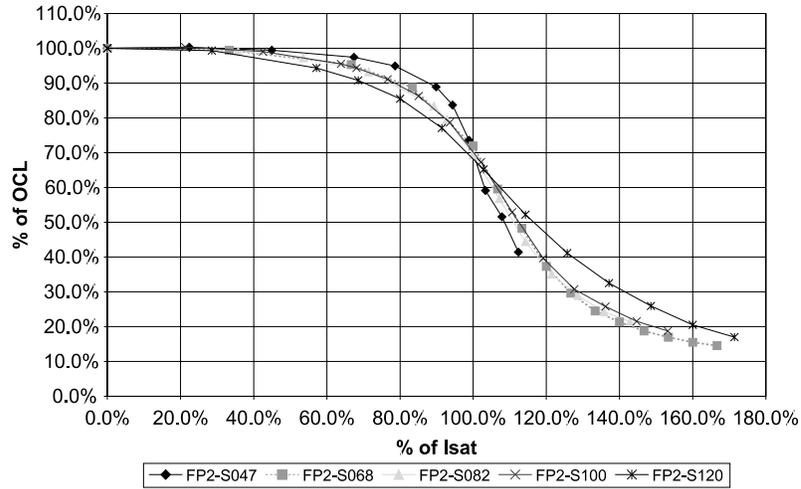
(3) For parallel mode operation, connect terminals 1 to 4 and 2 to 3 on PCB (use Single Conductor PCB Layout) For series mode operation, connect terminals 2 to 4 on PCB (Dual Conductor Model).

**Packaging Information**

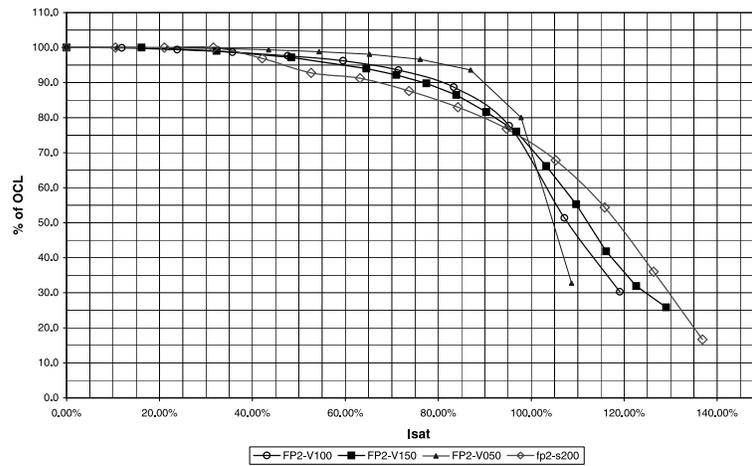


**Rolloff**

**Normalized Rolloff Curves - Flatpac**

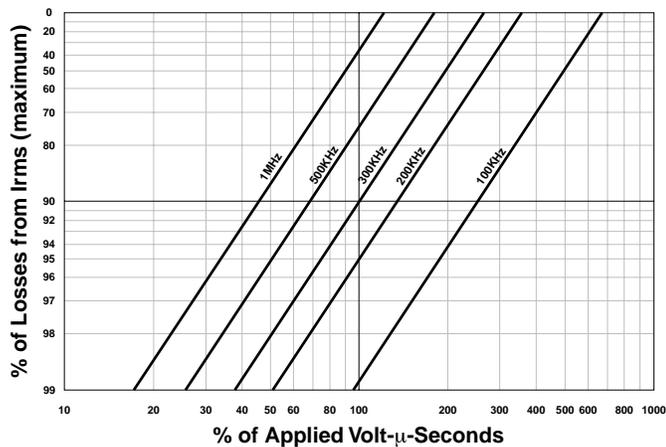


**FP2 Inductor Line  
Normalized Rolloff Curve**



**Core Loss**

**I<sub>rms</sub> DERATING WITH CORE LOSS**



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**3601 Quantum Boulevard Boynton Beach, Florida 33426-8638**  
**Tel: +1-561-752-5000 Toll Free: +1-888-414-2645 Fax: +1-561-742-1178**

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