

**HGX SERIES**
**UPGRADE**
**Load Life: 125°C 3000 hours, 135°C 3000 hours**

- Miniaturized, High Capacitance, High Ripple Current, Low ESR, High Reliability.
- Suitable for DC Link of low voltage inverter.
- AEC-Q200.

RoHS compliance


**◆SPECIFICATIONS**

Items	Characteristics																		
Category Temperature Range	-40~+135°C (150°C)																		
Rated Voltage Range	25~70Vdc																		
Capacitance Tolerance	±20% (20°C, 120Hz)																		
Leakage Current(MAX)	I=0.03CV or 4µA whichever is greater.(After 1 minute) I=Leakage Current(µA)      C=Capacitance(µF)      V=Rated Voltage(Vdc)																		
Dissipation Factor(MAX) (tanδ)	<table border="1"> <tr> <td>Rated Voltage (Vdc)</td> <td>25</td> <td>35</td> <td>50</td> <td>70</td> <td>(20°C, 120Hz)</td> </tr> <tr> <td>tanδ</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.10</td> <td></td> </tr> </table> <p>When capacitance is over 1000µF, tanδ shall be added 0.02 to the listed value with increase of every 1000µF.</p>	Rated Voltage (Vdc)	25	35	50	70	(20°C, 120Hz)	tanδ	0.14	0.12	0.10	0.10							
Rated Voltage (Vdc)	25	35	50	70	(20°C, 120Hz)														
tanδ	0.14	0.12	0.10	0.10															
Endurance	<p>After applying rated voltage with rated ripple current for 3000 hours (≥50Vdc:2000 hours) at each temperature, the capacitors shall meet the following requirements.</p> <table border="1"> <tr> <td>Capacitance Change</td> <td>Within ±30% of the initial value.</td> </tr> <tr> <td>Dissipation Factor</td> <td>Not more than 300% of the specified value.</td> </tr> <tr> <td>Leakage Current</td> <td>Not more than the specified value.</td> </tr> </table>	Capacitance Change	Within ±30% of the initial value.	Dissipation Factor	Not more than 300% of the specified value.	Leakage Current	Not more than the specified value.												
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Dissipation Factor	Not more than 300% of the specified value.																		
Leakage Current	Not more than the specified value.																		
Over temperature proof	<p>After applying rated voltage for 500 hours at 150°C, the capacitors shall meet the following requirements.</p> <table border="1"> <tr> <td>Capacitance Change</td> <td>Within ±30% of the initial value.</td> </tr> <tr> <td>Dissipation Factor</td> <td>Not more than 300% of the specified value.</td> </tr> <tr> <td>Leakage Current</td> <td>Not more than the specified value.</td> </tr> </table>	Capacitance Change	Within ±30% of the initial value.	Dissipation Factor	Not more than 300% of the specified value.	Leakage Current	Not more than the specified value.												
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Leakage Current	Not more than the specified value.																		
Low Temperature Stability Impedance Ratio(MAX)	<table border="1"> <tr> <td>Rated Voltage (Vdc)</td> <td>25</td> <td>35</td> <td>50</td> <td>70</td> <td>(120Hz)</td> </tr> <tr> <td>Z(-25°C)/Z(20°C)</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td></td> </tr> <tr> <td>Z(-40°C)/Z(20°C)</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td></td> </tr> </table>	Rated Voltage (Vdc)	25	35	50	70	(120Hz)	Z(-25°C)/Z(20°C)	2	2	2	2		Z(-40°C)/Z(20°C)	3	3	3	3	
Rated Voltage (Vdc)	25	35	50	70	(120Hz)														
Z(-25°C)/Z(20°C)	2	2	2	2															
Z(-40°C)/Z(20°C)	3	3	3	3															

**◆MULTIPLIER FOR RIPPLE CURRENT**

Frequency (Hz)	120	1k	10k	100k≤
Coefficient	0.45	0.80	1.00	1.00

**◆OPTION**

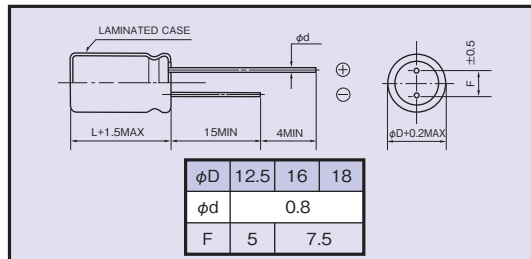
Standard item is blank.

**◆PART NUMBER**

□□□	HGX	□□□□□	M	□□□	□□	D×L
Rated Voltage	Series	Capacitance	Capacitance Tolerance	Option	Lead Forming	Case Size

**◆DIMENSIONS**

(mm)



**◆STANDARD SIZE**

Rated Voltage (Vdc)	Capacitance (μF)	Size φD×L (mm)	Rated ripple current I <sub>o</sub> (mA r.m.s./100kHz)		ESR (Ωmax/100kHz)	MAX ripple current I <sub>MAX</sub> (mA r.m.s./100kHz)		
			135°C	125°C		20°C	135°C	125°C
25	910	12.5×20	2060	2870	0.046	2260	2920	3910
	1100	12.5×23	2390	3340	0.038	2620	3390	4550
	1300	12.5×25	2610	3640	0.034	2860	3700	4960
	1600	12.5×20	2060	2870	0.046	2260	2920	3910
	1600	12.5×30	3030	4230	0.029	3330	4300	5770
	1600	16×20	2320	3240	0.034	2550	3300	4420
	2000	16×23	2690	3760	0.028	2960	3820	5120
	2000	18×20	2490	3470	0.033	2730	3520	4730
	2200	12.5×23	2390	3340	0.038	2620	3390	4550
	2200	16×25	2930	4090	0.025	3210	4150	5570
	2400	12.5×25	2610	3640	0.034	2860	3700	4960
	2400	18×23	2880	4010	0.027	3160	4080	5470
	2700	16×30	3280	4580	0.021	3610	4660	6250
	2700	18×25	3120	4360	0.025	3430	4430	5940
	3000	12.5×30	3030	4230	0.029	3330	4300	5770
	3000	16×20	2320	3240	0.034	2550	3300	4420
	3600	18×30	3460	4840	0.021	3800	4910	6590
	3900	16×23	2690	3760	0.028	2960	3820	5120
	3900	18×20	2490	3470	0.033	2730	3520	4730
	4300	16×25	2930	4090	0.025	3210	4150	5570
4700	18×23	2880	4010	0.027	3160	4080	5470	
5600	16×30	3280	4580	0.021	3610	4660	6250	
5600	18×25	3120	4360	0.025	3430	4430	5940	
6800	18×30	3460	4840	0.021	3800	4910	6590	
35	750	12.5×20	2060	2870	0.046	2260	2920	3910
	910	12.5×23	2390	3340	0.038	2620	3390	4550
	1000	12.5×25	2610	3640	0.034	2860	3700	4960
	1200	12.5×20	2060	2870	0.046	2260	2920	3910
	1300	12.5×30	3030	4230	0.029	3330	4300	5770
	1300	16×20	2320	3240	0.034	2550	3300	4420
	1500	12.5×23	2390	3340	0.038	2620	3390	4550
	1600	12.5×25	2610	3640	0.034	2860	3700	4960
	1600	16×23	2690	3760	0.028	2960	3820	5120
	1600	18×20	2490	3470	0.033	2730	3520	4730
	1800	16×25	2930	4090	0.025	3210	4150	5570
	2000	16×20	2320	3240	0.034	2550	3300	4420
	2000	18×23	2880	4010	0.027	3160	4080	5470
	2200	12.5×30	3030	4230	0.029	3330	4300	5770
	2400	16×30	3280	4580	0.021	3610	4660	6250
	2400	18×25	3120	4360	0.025	3430	4430	5940
	2700	16×23	2690	3760	0.028	2960	3820	5120
	2700	18×20	2490	3470	0.033	2730	3520	4730
	3000	16×25	2930	4090	0.025	3210	4150	5570
	3000	18×30	3460	4840	0.021	3800	4910	6590
3300	18×23	2880	4010	0.027	3160	4080	5470	
3600	16×30	3280	4580	0.021	3610	4660	6250	
3600	18×25	3120	4360	0.025	3430	4430	5940	
4700	18×30	3460	4840	0.021	3800	4910	6590	

Rated Voltage (Vdc)	Capacitance (μF)	Size φD×L (mm)	Rated ripple current I <sub>o</sub> (mA r.m.s./100kHz)		ESR (Ωmax/100kHz)	MAX ripple current I <sub>MAX</sub> (mA r.m.s./100kHz)		
			135°C	125°C		20°C	135°C	125°C
50	510	12.5×20	1530	2280	0.072	1860	2400	3220
	620	12.5×20	1490	2220	0.076	1800	2330	3130
	620	12.5×23	1780	2660	0.058	2160	2790	3750
	680	12.5×25	1950	2900	0.052	2360	3050	4090
	750	12.5×23	1730	2590	0.062	2100	2710	3640
	910	12.5×25	1890	2820	0.055	2290	2960	3980
	910	12.5×30	2320	3460	0.042	2810	3630	4880
	910	16×20	1890	2820	0.049	2290	2960	3980
	1100	12.5×30	2250	3370	0.044	2730	3530	4740
	1100	16×20	1860	2780	0.051	2260	2920	3910
	1100	16×23	2200	3280	0.040	2660	3440	4620
	1100	18×20	2060	3070	0.047	2490	3220	4320
	1300	16×23	2160	3230	0.041	2620	3390	4540
	1300	16×25	2390	3570	0.036	2900	3750	5030
	1300	18×20	2040	3050	0.047	2470	3200	4290
	1300	18×23	2390	3560	0.038	2900	3740	5020
	1600	16×25	2350	3510	0.037	2860	3690	4950
	1600	16×30	2840	4240	0.029	3440	4450	5970
	1600	18×23	2370	3540	0.039	2870	3710	4980
	1600	18×25	2600	3880	0.034	3150	4070	5470
2000	16×30	2790	4170	0.030	3390	4370	5870	
2000	18×25	2580	3850	0.034	3130	4040	5420	
2000	18×30	3080	4600	0.027	3740	4830	6480	
2400	18×30	3050	4560	0.028	3700	4780	6420	
70	240	12.5×20	1340	2000	0.093	1630	2100	2820
	330	12.5×23	1560	2340	0.076	1900	2450	3290
	360	12.5×20	1300	1940	0.099	1580	2040	2740
	360	12.5×25	1710	2550	0.067	2070	2680	3600
	430	12.5×23	1520	2260	0.080	1840	2380	3190
	430	16×20	1690	2530	0.062	2050	2650	3560
	470	12.5×30	2040	3040	0.054	2470	3190	4290
	510	12.5×25	1660	2470	0.072	2010	2600	3490
	560	16×23	1970	2940	0.050	2390	3080	4140
	560	18×20	1860	2780	0.057	2260	2920	3920
	620	12.5×30	1980	2950	0.057	2400	3100	4150
	620	16×20	1660	2480	0.064	2010	2600	3490
	620	16×25	2150	3200	0.045	2600	3360	4510
	680	18×23	2160	3230	0.047	2620	3390	4540
	750	16×23	1930	2880	0.052	2340	3020	4060
	750	18×20	1840	2750	0.058	2230	2880	3870
	820	16×30	2550	3800	0.036	3090	3990	5360
	820	18×25	2350	3510	0.042	2860	3690	4950
	910	16×25	2100	3140	0.047	2550	3300	4420
	1000	18×23	2140	3190	0.048	2590	3350	4490
1000	18×30	2790	4170	0.033	3390	4380	5870	
1100	16×30	2500	3730	0.038	3030	3910	5250	
1100	18×25	2330	3470	0.042	2820	3650	4890	
1300	18×30	2760	4120	0.034	3350	4330	5810	

Rated ripple current I<sub>o</sub> :  
Ripple current continuous operation within endurance lifetime.

Maximum ripple current I<sub>MAX</sub> :  
Maximum ripple current continuous operation.  
Estimated lifetime complies with our lifetime calculation formula.

