

Type 329/X329 IGBT Snubber Capacitor

ASC™ 329/X329 (IGBT Snubber Capacitors) are designed for high demand environments as well as lower current applications.

The 329 is a hybrid design combining self healing metallized film and foil to maintain very high peak and RMS currents. The X329 design utilizes only metallized film for applications that require more moderate peak currents and RMS currents but higher capacitance values.

Our new standard terminal style (W) meets the latest IGBT products with respect to terminal spacing. Custom voltage, capacitance values and terminal designs are available.



General Specifications

* Capacitance ratings are dependent upon voltage levels and total current

** Terminal to case test is only completed on a validation basis as the case is composed of nonconductive materials

Parameter	Value
Capacitance	0.1µF – 10.0µF*
Tolerance	±5%, ±10% – Special tolerance on request
Rated Voltage	600 – 2000 VDC, 250 – 500 Vrms
Temperature Range (operational)	-40/85C (custom ratings available)
Temperature Range (storage)	-40/95C
RMS Current	Up to 25 Arms
Standards	IEC61071**
Case	Flame retardant molded plastic case and UL94-V0 epoxy
Terminals	Tin plated brass tabs slotted for 20-29 or 33-42 mm bolt spacing
Tan δ	2×10^{-4} Polypropylene
Terminal to Terminal Test	1.5 x Undc 10 seconds
Terminal to Case Test	$U_{T-CASE} = 2U_L + 1000V$ or 3000V whichever is highest value**
Reliability	100 FIT
Insulation Resistance	10,000 MΩ·µF at 100V after 2 minutes

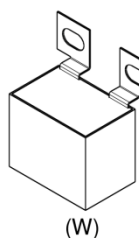
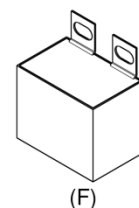
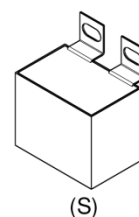
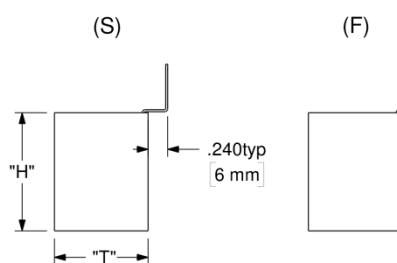
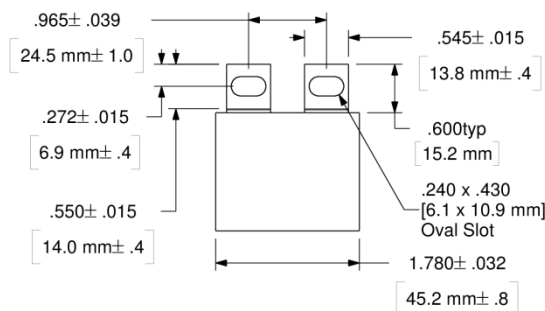
Applications

IGBT Snubbers for inverters

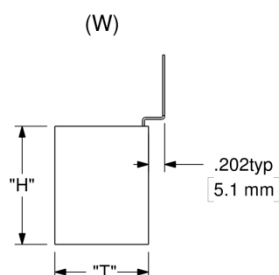
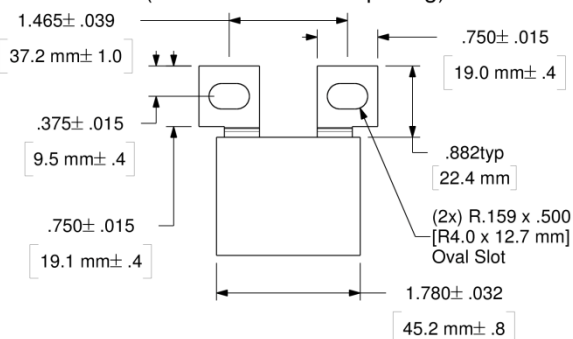
329 Specifications

Cap [μF]	600VDC – 250VAC – 800Vpeak						1200VDC – 500VAC – 1600Vpeak						2000VDC – 500VAC – 2600Vpeak					
	I _{RMS} [A _{RMS}]	I _{PEAK} [A]	ESR (100kHz) [mΩ]	T _{MAX} [in]	H _{MAX} [in]	Case	I _{RMS} [A _{RMS}]	I _{PEAK} [A]	ESR (100kHz) [mΩ]	T _{MAX} [in]	H _{MAX} [in]	Case	I _{RMS} [A _{RMS}]	I _{PEAK} [A]	ESR (100kHz) [mΩ]	T _{MAX} [in]	H _{MAX} [in]	Case
0.10													2.7	202	16.2	0.860	1.113	A
0.12													3.1	242	10.5	0.860	1.113	A
0.15							2.9	200	11.9	0.860	1.113	A	3.8	302	8.4	0.860	1.113	A
0.18							3.3	240	9.9	0.860	1.113	A	4.3	363	7.0	0.860	1.113	A
0.22	3.3	218	10.5	0.860	1.113	A	3.9	293	8.1	0.860	1.113	A	5.1	443	5.7	0.860	1.113	B
0.27	3.8	268	8.6	0.860	1.113	A	4.6	360	6.6	0.860	1.113	A	6.0	544	4.7	0.860	1.113	B
0.33	4.5	327	7.0	0.860	1.113	A	5.4	440	5.4	0.860	1.113	A	7.0	665	3.8	1.160	1.463	B
0.39	5.1	386	6.0	0.860	1.113	A	6.1	520	4.6	0.860	1.113	A	7.9	786	3.2	1.160	1.463	B
0.47	5.9	466	4.9	0.860	1.113	A	7.1	626	3.8	1.160	1.463	B	9.3	947	2.9	1.160	1.463	C
0.56	6.8	555	4.1	0.860	1.113	A	8.2	746	3.2	1.160	1.463	B	10.7	1129	2.9	1.160	1.463	C
0.68	7.8	674	3.4	0.860	1.113	A	9.6	906	2.9	1.160	1.463	B	12.5	1371	2.9	1.460	1.863	C
0.82	9.2	812	2.9	1.160	1.463	B	11.0	1092	2.9	1.160	1.463	B	14.7	1653	2.9	1.460	1.863	D
1.00	10.8	991	2.9	1.160	1.463	B	13.1	1332	2.9	1.460	1.863	C	17.2	2016	2.9	1.760	2.263	D
1.20	12.4	1189	2.9	1.160	1.463	B	15.1	1599	2.9	1.460	1.863	C						
1.50	14.7	1486	2.9	1.160	1.463	B	18.0	1998	2.9	1.460	1.863	C						
1.75	16.9	1734	2.9	1.460	1.863	C	20.6	2331	2.9	1.760	2.263	D						
2.00	18.8	1981	2.9	1.460	1.863	C	23.0	2665	2.9	1.760	2.263	D						
2.20	20.3	2179	2.9	1.460	1.863	C	24.8	2931	2.9	1.760	2.263	D						
2.50	22.4	2477	2.9	1.460	1.863	C												

Dimensions: (20 - 29 mm Bolt Spacing)



(32.5 - 42 mm Bolt Spacing)



X329 Specifications

Cap [μF]	600VDC – 250VAC – 800Vpeak						1200VDC – 500VAC – 1600Vpeak						2000VDC – 500VAC – 2600Vpeak					
	I _{RMS} [A _{RMS}]	I _{PEAK} [A]	ESR (100kHz) [mΩ]	T _{MAX} [in]	H _{MAX} [in]	Case	I _{RMS} [A _{RMS}]	I _{PEAK} [A]	ESR (100kHz) [mΩ]	T _{MAX} [in]	H _{MAX} [in]	Case	I _{RMS} [A _{RMS}]	I _{PEAK} [A]	ESR (100kHz) [mΩ]	T _{MAX} [in]	H _{MAX} [in]	Case
0.10													2.2	42	28.1	0.860	1.113	A
0.12													2.5	50	23.4	0.860	1.113	A
0.15													3.0	62	18.7	0.860	1.113	A
0.18													3.4	75	15.6	0.860	1.113	A
0.22							2.9	60	18.7	0.860	1.113	A	4.0	91	12.8	0.860	1.113	A
0.27							3.4	74	15.3	0.860	1.113	A	4.7	112	10.4	0.860	1.113	A
0.33	2.7	35	30.5	0.860	1.113	A	4.0	91	12.5	0.860	1.113	A	5.5	137	8.5	1.160	1.463	B
0.39	3.0	41	25.8	0.860	1.113	A	4.5	107	10.6	0.860	1.113	A	6.3	162	7.2	1.160	1.463	B
0.47	3.5	50	21.4	0.860	1.113	A	5.2	129	8.8	0.860	1.113	A	7.3	195	6.0	1.160	1.463	B
0.56	4.0	59	18.0	0.860	1.113	A	6.0	154	7.4	0.860	1.113	A	8.3	232	5.0	1.160	1.463	B
0.68	4.7	72	14.8	0.860	1.113	A	7.0	187	6.1	1.160	1.463	B	9.8	282	4.1	1.460	1.863	C
0.82	5.4	86	12.3	0.860	1.113	A	8.1	225	5.0	1.160	1.463	B	11.5	340	3.4	1.460	1.863	C
1.00	6.3	105	10.1	0.860	1.113	A	9.6	274	4.1	1.160	1.463	B	13.5	415	2.9	1.760	2.263	D
1.20	4.6	76	14.4	0.860	1.113	A	11.0	329	3.4	1.160	1.463	B	15.6	498	2.9	1.760	2.263	D
1.50	5.4	95	11.5	0.860	1.113	A	13.2	412	2.9	1.460	1.863	C	18.6	623	2.9	1.760	2.263	D
1.75	6.1	111	9.9	0.860	1.113	A	15.1	480	2.9	1.460	1.863	C						
2.00	6.8	127	8.6	0.860	1.113	A	16.6	549	2.9	1.460	1.863	C						
2.20	7.4	140	7.8	0.860	1.113	A	18.1	604	2.9	1.760	2.263	D						
2.50	8.1	159	6.9	0.860	1.113	A	20.1	686	2.9	1.760	2.263	D						
3.00	9.3	191	5.7	1.160	1.463	B	23.3	823	2.9	1.760	2.263	D						
4.00	11.7	254	4.3	1.160	1.463	B												
5.00	14.1	318	3.4	1.160	1.463	B												
6.00	16.2	381	2.9	1.460	1.863	C												
7.00	18.4	445	2.9	1.460	1.863	C												
8.00	20.7	508	2.9	1.460	1.863	C												
10.0	24.7	636	2.9	1.460	1.863	C												

329
X329

Ordering Information:

Type	Terminal Style	Capacitance	Tolerance	Voltage
329	(S) = 20-29 mm Step	0.1	5 = ±5%	600
X329	(F) = 20-29 mm Flush	↑	10 = ±10%	↑
	(W) = 33-42 mm Wide	10		2000

Examples:	Order Code
Type 329, Step Terminal, 0.68uF ±5%, 600 VDC	329(S) 0.68-5-600
Type X329, Wide Terminal, 10uF ±10%, 2000 VDC	X329(W) 10-10-2000