	Specification	Symbol	Condition / C	omment		1001-10-L	.C2 1201-	10-LC2	1401-10-LC2	1501-10-LC2	Unit		
	Maximum Operating Voltage	$V_{O(max)}$	I _{off} < 50 μADC,		± 100		120	± 140	± 150	kVDC			
	Maximum Isolation Voltage	VI	•									kVDC	
RATINGS	Max. Housing Insulation Voltage	V _{INS}			g surface, 3 minute							kVDC	
	Maximum Turn-On Peak Current	I _{P(max)}	$T_{case} = 25^{\circ}C$ $t_p < 200 \ \mu s$, duty cycle < 1%						10				
		,			uty cycle <1%				59	9			
8				t _p < 10 ms,	duty cycle <1%				36				
8				t _p < 100 ms, duty cycle <1%				27				ADC	
2	Maximum Continuous Load Current	I _{L(max)}		Standard devices			1.26						
MAXIMUM		_(,	T _{case} = 25°C Devices with option DLC				16.5					ADC	
Z	Max. Continuous Power Dissipation	P _{d(max)}	T 0500	Standard devices & FC, forced air 4 m/s Devices with option DLC			60		75	92	98		
Щ	·	, ,	T _{case} = 25°C				4500	4	700	4900	5000	Watt	
5	Linear Derating		Above 25°C	Standard d	Standard devices & FC, forced air 4 m/s		1.425	1,	741	1,867	2.06		
20			Devices with option DLC				237,5	30	7,31	354,81	393.16	W/K	
4BSOLUTE	Operating Temperature Range	To	Standard devices & options CF, GCF, ILC. (Option DLC)						-407	0 (60)		°C	
4	Storage Temperature Range	Ts	Switches with option ILC may require frost protection!				-4090				°C		
	Max. Permissible Magnetic Field	В	Homogeneous steady-field, surrounding the whole switch				25					mT	
	Max. Auxilliary Voltage	V _{aux}	Built-in overvoltage limiter (replaceable)				5.5					VDC	
	Permissible Operating Voltage Range	Vo	NOTE: V _{br} is a test parameter for quality control purposes only. Not applicable in normal operation!				0 ± 10	0 0	± 120	0 ± 140	0 ± 150	kVDC	
	Typical Breakdown Voltage	V _{br}					110	1	132	148	164	kVDC	
	Typical Off-State Current	l _{off}	0.8xV _O , T _{case} =2570°C, reduced l _{off} of			st			< 40			µADC	
	Typical Turn-On Resistance	R _{stat}	Each switching path 0.1 x I _{P(max)} , T _{case} =25°C				17.4	2	1.2	29.1	32.2	p., 12 0	
	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	· iotat			1.0 x I _{P(max)} , T _{case} =25°C		43		1.5	57.7	63.9		
					1.0 x I _{P(max)} , T _{case} =70°C		77.9	10	03.7	143.4	158.9	Ohm	
	Typical Propagation Delay Time	t _{d(on)}	Resistive load, 0.1 x I _{P(max)} , 0.8 x V _{O(max)} , 50-50%					25	60		ns		
	Typical Output Pulse Jitter	Impedance matched input, V _{aux} / V _{ctrl} = 5.00 VDC									ns		
	Typical Turn-On Rise Time		Resistive load, 10-90% 0.1 x V _{O(max)} , I _L = 0.1 x I				16		18	20	21		
CTERISTICS					0.8 x V _{O(max)} , I _L		66		78	92	98		
					$0.8 \times V_{O(max)}$, $I_L = 1.0 \times I_{p(r)}$		72		81	102	109	ns	
	Typical Turn-Off Rise Time		Resistive load,	10-90%					50)			
					$0.8 \text{ x V}_{O(max)}, I_L = 1.0 \text{ x } I_{p(max)}$				10	0	ns		
	Maximum Turn-On Time	t _{on(max)} No limitation					∞					ns	
	Minimum Turn-On Time	t _{on(min)}	1						25	60		ns	
	Maximum Turn-Off Time	t _{off(max)}	No limitation			×)		ns				
Ž	Minimum Turn-Off Time	t _{off(min)}	*						25	60		ns	
Ž	Max. Continuous Switching	@ V _{aux} = 5.00 V						1.2	1.0	0.9			
S	Frequency		Sw. shutdown if Standard devices with HFS supply			5		5	5	5			
44			f _(max) is exceeded Opt. HFS + sufficient cooling option				10		10	10	10	kHz	
ELECTRICAL	Maximum Burst Frequency	Use option HFB for >10 pulses within 20µs or less						10	0		kHz		
Ĭ,	Maximum Number of Pulses / Burst N _(max)		@ f _{b(max)} Standard						>1				
E			Note: Option HFB requires external buffer capacitors with a voltage Option I-HFB				>100						
E		Cc	rating of > 630VDC and a cpacitance of 100nF per additional Option HFB									Pulses	
	Coupling Capacitance	HV side against control side						<11			pF		
	Natural Capacitance	C _N	Between switch poles, @ 0.5 x V _{O(max)}				13 11 9 8				pF		
	Control Voltage Range V _{ctrl}		The V _{ctrl} has no impact on the output pulse shape.				310					VDC	
	Auxiliary Supply Voltage Range Vaux		The +5 V supply is not required in the HFS mode.				4.5 5.5 330 350 380 400					VDC	
	Typical Auxiliary Supply Current	l _{aux}	Vaux = 5.00 VDC, T _{case} = 25°C. 0.01 x f _(max)		, ,	1000			1000	1000	mADC		
	Fault Signal Output			Active current limitation above 1A. @ f _(max) Switch will be turn off, if f>f _(max) , V _{aux} <4.75V or T _{case} >75°C			1000 1000 1000 1000 mAD					IIIADO	
	T duit Oighai Output			Fault condition is indicated by a logical "L"				<0.8 VDC					
	Opt. HFS, Ext. Supply Voltage V1 V _{HF}		Stability ±3%, current consumption <0.4 mA/kHz @ 25°C				15 VD						
	Opt. HFS, Ext. Supply Voltage V2	V _{HFS(V2)}	Stability ±3%, current consumption <0.5 mA/kHz @ 25°C			450			550	600	VDC		
	Intrinsic Diode Forward Voltage V _F		$T_{case} = 25^{\circ}C$, $I_F = 0.3 \times I_{P(max)}$			80		95	110	113	VDC		
	Diode Reverse Recovery Time	trrc	$T_{case} = 25^{\circ}\text{C}$, $I_F = 0.3 \times I_{P(max)}$, $di/dt = 100 \text{ A/}\mu\text{s}$						<25			ns	
	Dimensions	Standard housing				432x200x	89 552x	200x89	672x200x89	732x200x89			
HOUSING		LxWxH	Devices with option DLC				432x200x1		200x131	672x200x131	732x200x131	mm³	
	Maint						44		15	20	00		
	Weight	Standard housi	•			11		15	20	22	V~		
			Devices with option DLC				13		18	24	27	Kg	
	Control Signal Input Pin 1 / Yellow (LS-C: Pin 1). TTL compatible (LS-C: With 100Ω termination). So							r characterist	ics. Contr	ol voltage 2-10 V	(3-5 V for low iitt	er).	
FUNCTIONS	Control Signal Input Logic GND / 5V Return Pin 1 / Yellow (LS-C: Pin 1). TTL compatible (LS-C: With 100Ω termination). Schmitt-Trigger characteristics. Control voltage 2-10 V (3-5 V for low jitter). Pin 2 / Black (LS-C: Shielding). The ground pin is internally connected with the safety earthings terminals (threaded inserts) on bottom side.											,.	
71	5V Auxiliary Supply Fault Signal Output Pin 3 / Red (LS-C: Pin 4). The 5 V input is used for rep rates up to the specified Pin 4 / Orange (LS-C: Pin 3). TTL output, short circuit proof. Indicating switch &												
S	Inhibit Signal Input Pin 4 / Orange (LS-C: Pin 3). TTL output, short circuit proof. Indicating switch & Pin 5 / Green (LS-C: Pin 2). TTL compatible, Schmitt-Trigger characteristics for									-	-		
F	LED Indicators GREEN: "Auxiliary power good, switch OFF". YELLOW: "Control signal receiv								-				
ORDERING	HTS 1001-10-LC2 Fast HV Mosfet Switch, 1	DLC: 65°C, response time < 3 s @ 3xPd(max), Δ T=25K (40 to Option LP Low Pass. Input filter for increased noise immunity.					Option I-PC			I. ding to customer specif	fication		
	HTS 1201-10-LC2 Fast HV Mosfet Switch, 1 HTS 1201-10-LC2 Fast HV Mosfet Switch, 1	Option HFB High Frequency Burst (improved capability by external ca					Option UL-94		dant components according dant casting resin, ULS		ioutiUII.		
	HTS 1401-10-LC2 Fast HV Mosfet Switch, 1	Option HFS High Frequency Switching (two auxiliary supply inputs V1			(& V2)	Option I-FWD	Integrated Fr	ree-Wheeling Diode. In c	onnection with inductive l				
	HTS 1501-10-LC2 Fast HV Mosfet Switch, 1	Option I-HFS Integrated High Frequency Burst				Option I-FWDN	_	•	ork. In connection with inc				
		Option S-TT Soft Transition Time decrease the rise and fall time by 20% Option Min-On Individually increased "Min. On-Time" to avoid unwanted				Option PT-C Option SEP-C	-		leads (I=75mm) with lem ith LED indicators in a sep				
			Option Min-On Individually increased "Min. On-Time" to avoid unwanted Option Min-Off Individually increased "Min. Off-Time" to avoid unwanted				Option TH	Tubular Hou			parato		
0		Option PCC Pulser Configuration. Switch combined with custom speci Option ISO-120 120kV Isolation. Isolation Voltage increased to 120kV.			ific parts.	Option CF	Copper Coo	oling Fins. P _{d(max)} can b	e increased by the fact				
						Option DLC			ncreased by the factor 10				
Cuel	omized switching units are available on reserve	ast All data	Option ISO-200 200kV Isolation. Isolation Voltage increased to 200kV. nd specifications subject to change without notice. Please visit www.bet								FER TO THE OPTION 13-01-2016 ©2012 A		
cust	omized switching units are available on requi	zan All Udid a	ma specifications st	report to change	- without notice. Pleas	oc visit www.beh	mercom for up-0	uulleð.	1001-1	O LOZENO / REVISION	13-01-2016 ©2012 A	ngms	