

Dual staked MIL-STD 1553 Interface Transformers - SBIT x 7.5S



- As per MIL-STD 1553 B
- Meet all the electrical requirements of Manchester II serial bi-phase data transmission, 1 MHz operation
- Epoxy molding in accordance with outgassing requirements of ECSS-Q-ST-70-02C
- Applied standards: ESCC 3201 generic specification for space products
- Open-circuit impedance greater than 3k Ω (4k Ω typical value) from 75KHz to 1MHz
- Frequency range 75KHz to 1MHz
- Operating temperature range: -55 °C to +125 °C
- Weight: <5grams

Electrical Data (25°C)

Parameter	Unit	SBIT 1 7.5S	SBIT 2 7.5S	SBIT 3 7.5S	SBIT 4 7.5S	SBIT 5 7.5S	SBIT 6 7.5S	SBIT 7 7.5S	SBIT 8 7.5S
Frequency Response									
Operating Range	kHz	75 to 1000	75 to 1000	75 to 1000	75 to 1000	75 to 1000	75 to 1000	75 to 1000	75 to 1000
Common-Mode Rejection (min)	dB	45	45	45	45	45	45	45	45
Electrical Requirements									
Terminal Winding Resistance Rdc									
• 1-3 / (11-13) (max)	Ω	3.5	3	1.9	1	1	1.2	3.2	1
• 4-8 / (14-18) (max)	Ω	3	3	1.9	3	3	3	3	3
Interwinding Capacitance (max)	pF	70	30	70	45	45	70	70	70
Winding Inductance									
• LM (min)	mH	7.5	7.5	7.5	6.0	6.0	8.0	8.0	6.0
• LL (max)	μ H	6.0	6.0	6.0	8.0	6.0	8.0	6.0	7.0
Peak-to-Peak Voltage (max)									
Terminals 1-3 primary	Vpp	60	60	60	38	38	39	60	44
Droop (max)									
3 ms Pulse Duration									
140 Ω Load Across Terminals 4-8	%	10	10	10	10	10	10	10	10
Decay Time (max)									
140 Ω Load Across Terminals 4-8	ns	25	25	25	25	25	25	25	25
Backswing									
140 Ω Load Across Terminals 4-8	%	none	none	none	none	none	none	none	none
Turns Ratios									
Terminals									
• 1-3 : 4-8 / 11-13 : 14-18		1.4 : 1	1 : 1	1.20 : 1	1 : 2.5	1 : 2.5	1 : 3.2	1.25 : 1	1 : 2.12
• 1-3 : 5-7 / 11-13 : 15-13		2 : 1	1 : 0.707	1.67 : 1	1 : 1.75	1 : 1.79	1 : 2.3	1.66 : 1	1 : 1.5

To Order

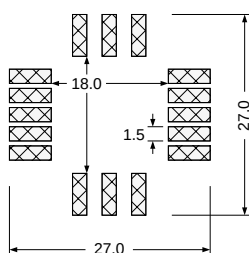
SBIT	#	7.5	S
Range	Part 1 to 8	Case height 7.5	S SMD

SBIT # 7.5S

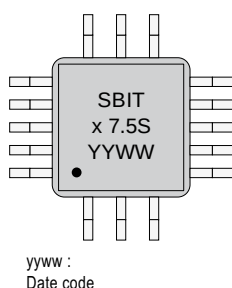
Notes

Interwinding insulation: 500Vrms-500 Hz.
Flammability compliance: UL94V0.

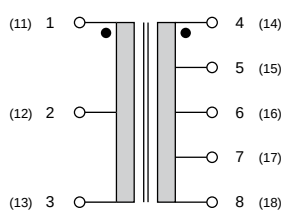
PCB Layout (suggested)



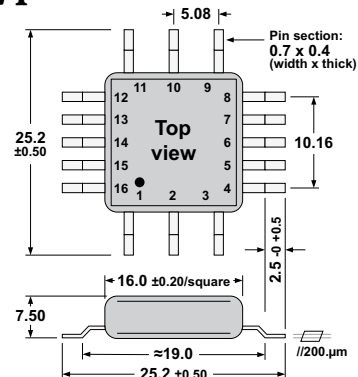
Marking



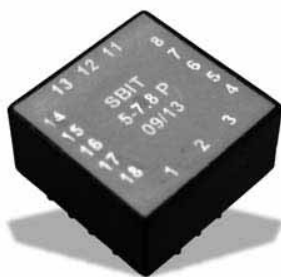
Connections



Typical Dimensions (mm)



Dual staked MIL-STD 1553 Interface Transformers - SBIT x 7.8P



- As per MIL-STD 1553 B
- Meet all the electrical requirements of Manchester II serial bi-phase data transmission, 1 MHz operation
- Epoxy molding in accordance with outgassing requirements of ECSS-Q-70-02, MILT 21038
- Open-circuit impedance greater than $3k\Omega$ ($4k\Omega$ typical value) from 75 kHz to 1 MHz
- Frequency range 75 kHz to 1 MHz
- Operating temperature range: -55°C to $+125^{\circ}\text{C}$
- Weight: <5 grams

Electrical Data (25°C)

Parameter	Unit	SBIT 1 7.8P	SBIT 2 7.8P	SBIT 3 7.8P	SBIT 5 7.8P	SBIT 7 7.8P	SBIT 8 7.8P
Frequency Response							
Operating Range	kHz	75 to 1000	75 to 1000	75 to 1000	75 to 1000	75 to 1000	75 to 1000
Common-Mode Rejection (min)	dB	45	45	45	45	45	45
Electrical Requirements							
Terminal Winding Resistance Rdc							
• 1-3 (max)	Ω	2.8	2.8	2.8	2	2.8	2.2
• 4-8 (max)	Ω	3	3.5	3	3.5	3	3.5
Interwinding Capacitance (max)	pF	50	50	50	50	50	50
Winding Inductance							
• LM (min) (1-3)	mH	7.0	7.0	7.0	7.0 (4-8)	8.0	7.0 (4-8)
• LL (max)	μH	6.0	6.0	6.0	6.0	6.0	6.0
Turns Ratios							
Terminals							
• 1-3 : 4-8		1.4 : 1	1 : 1	1.20 : 1	1 : 2.5	1.25 : 1	1 : 2.12
• 1-3 : 5-7		2 : 1	1 : 0.707	1.67 : 1	1 : 1.79	1.66 : 1	1 : 1.5

To Order

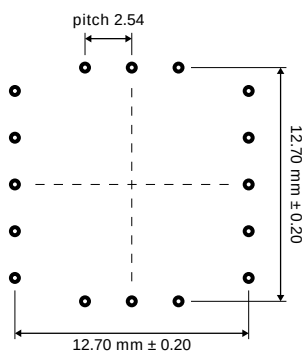
SBIT	#	7.8	P
Range	Part 1 to 8 except 4 and 6	Case height 7.8	P pins through hole

SBIT # 7.8P

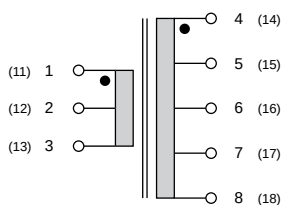
Notes

Interwinding insulation: 500 Vrms-500 Hz.
Flammability compliance: UL94V0

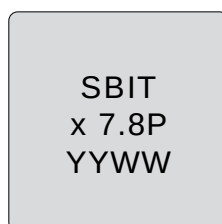
PCB Layout (suggested)



Connections



Marking



yyww :
Date code

Typical Dimensions (mm)

