

LIGHTNING INDUCED TRANSIENTS

DO-160 SECTION 22

MIL-STD-461 / CS117

DO-160 SECTION 22

MIL-STD-461 / CS117

Pin Injection

Single Stroke

Multiple Stroke

Multiple Stroke

Multiple Burst

Multiple Burst



AVI-LV5 Test System
Level 5 test system for RTCA DO-160 Section 22



EUT Designation Code

Waveform set	Test type	Waveforms
A	PIN	3/3, 4/1
B	PIN	3/3, 5A/5A
C	SS	2, 3
D	SS	2, 3, 4
E	SS	1, 3
F	SS	3, 5A
G	SS	2, 3
H	MS	2, 3
	SS	2, 3, 4
J	MS	2, 3, 4
	SS	1, 3
K	MS	1, 3, 5A
	SS	3, 5A
L	MB	3
M	MB	6



AVI-LV3 Test System
Level 3 test system for RTCA DO-160 Section 22

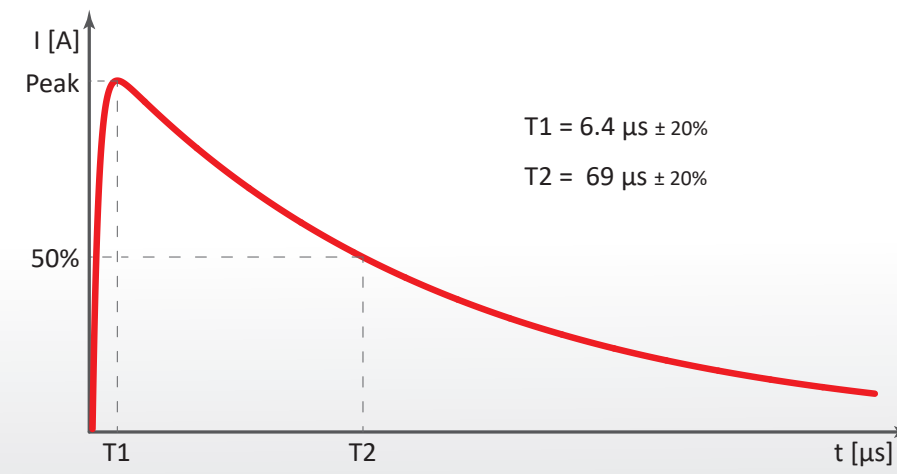


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WF1



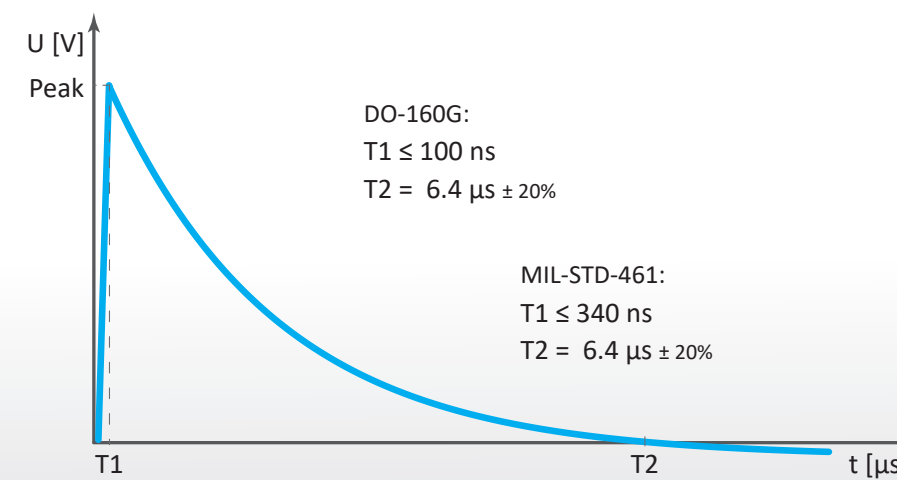
WF1 Cable Bundle SS		
Level	V _{Limit}	I _{Test}
1	50	100
2	125	250
3	300	600
4	750	1500
5	1600	3200

Level	FS		SS	
	V _{Limit}	I _{Test}	V _{Limit}	I _{Test}
1	50	50	25	25
2	125	125	62.5	62.5
3	300	300	150	150
4	750	750	375	375
5	1600	1600	800	800

Level	FS		SS	
	V _{Limit}	I _{Test}	V _{Limit}	I _{Test}
1	300	600 (60*)	150	150 (30*)
2	750	1500 (150*)	375	375 (75*)

*reduced level for individual power leads or low count wire bundles

WF2

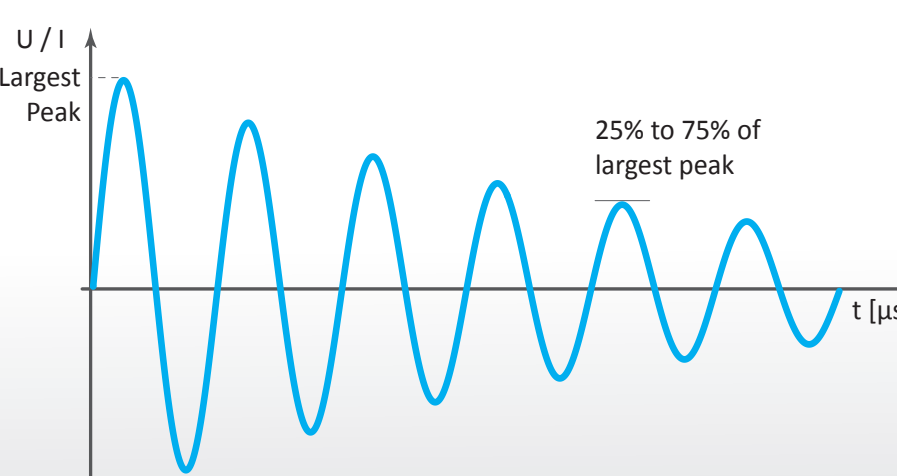


WF2 Cable Bundle SS		
Level	V _{Test}	I _{Limit}
1	50	100
2	125	250
3	300	600
4	750	1500
5	1600	3200

Level	FS		SS	
	V _{Test}	I _{Limit}	V _{Test}	I _{Limit}
1	50	50	25	25
2	125	125	62.5	62.5
3	300	300	150	150
4	750	750	375	375
5	1600	1600	800	800

Level	FS		SS	
	V _{Test}	I _{Limit}	V _{Test}	I _{Limit}
1	300	600	150	150
2	750	1500	375	375

WF3



WF3 Pin Injection (1MHz)		
Level	V _{oc}	I _{sc}
1	100	4
2	250	10
3	600	24
4	1500	60
5	3200	128

WF3 Cable Bundle SS (1810 MHz)		
Level	V _{Test}	I _{Limit}
1	100	20
2	250	50
3	600	120
4	1500	300
5	3200	640

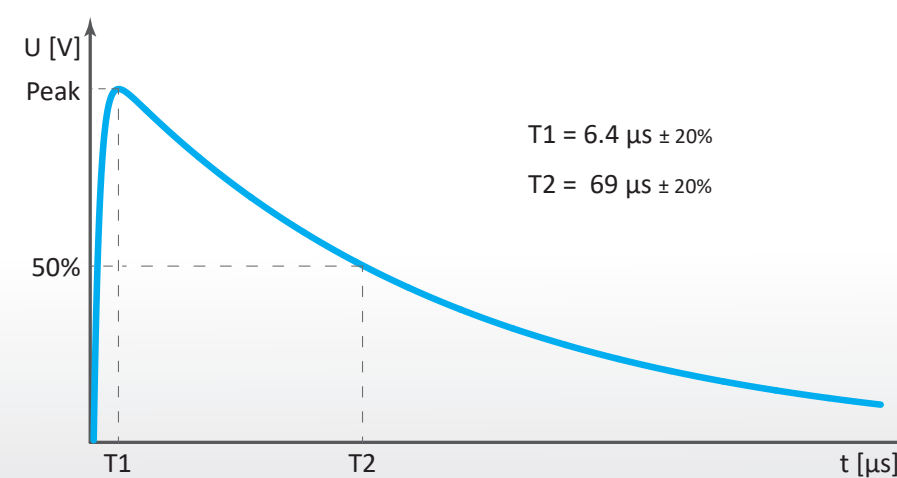
Level	FS		SS	
	V _{Test}	I _{Limit}	V _{Test}	I _{Limit}
1	100	20	50	10
2	250	50	125	25
3	600	120	300	60
4	1500	300	750	150
5	3200	640	1600	320

Level	FS		SS	
	V _{Test}	I _{Limit}	V _{Test}	I _{Limit}
1	600	120 (24*)	300	60 (12*)
2	1500	300 (60*)	750	150 (30*)

Level	Cable Bundle MB (1810 MHz) WF3	
	V _{Test}	I _{Limit}
1	60	1
2	150	2.5
3	360	6
4	900	15
5	1920	32

Level	Cable Bundle MB (1810 MHz) WF3	
	V _{Test}	I _{Limit}
1	360	6
2	900	15

WF4

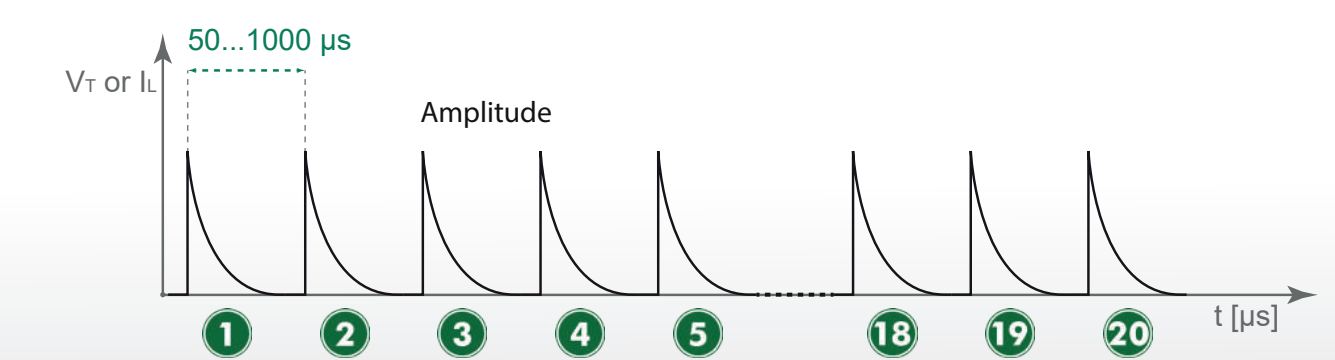


WF4 Pin Injection		
Level	V _{oc}	I _{sc}
1	50	10
2	125	25
3	300	60
4	750	150
5	1600	320

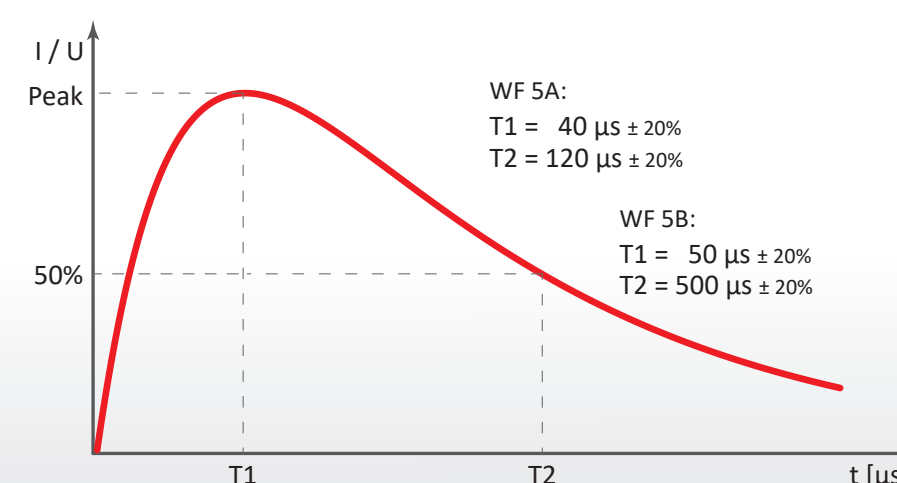
WF4 Cable Bundle SS		
Level	V _{Test}	I _{Limit}
1	50	100
2	125	250
3	300	600
4	750	1500
5	1600	3200

Level	FS		SS	
	V _{Test}	I _{Limit}	V _{Test}	I _{Limit}
1	25	50	12.5	25
2	62.5	125	31.25	62.5
3	150	300	75	150
4	375	750	187.5	375
5	800	1600	400	800

Level	FS		SS	
	V _{Test}	I _{Limit}	V _{Test}	I _{Limit}
1	300	1000 (300*)	75	200 (150*)
2	750	2000 (750*)	187.5	400 (375*)



WF5A & B

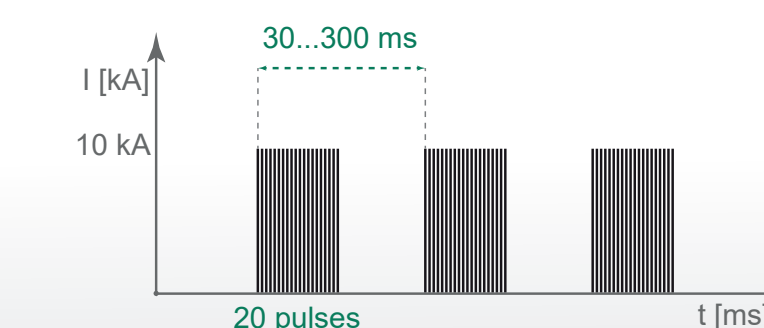


WF5A Pin Injection		
Level	V _{oc}	I _{sc}
1	50	50
2	125	125
3	300	300
4	750	750
5	1600	1600

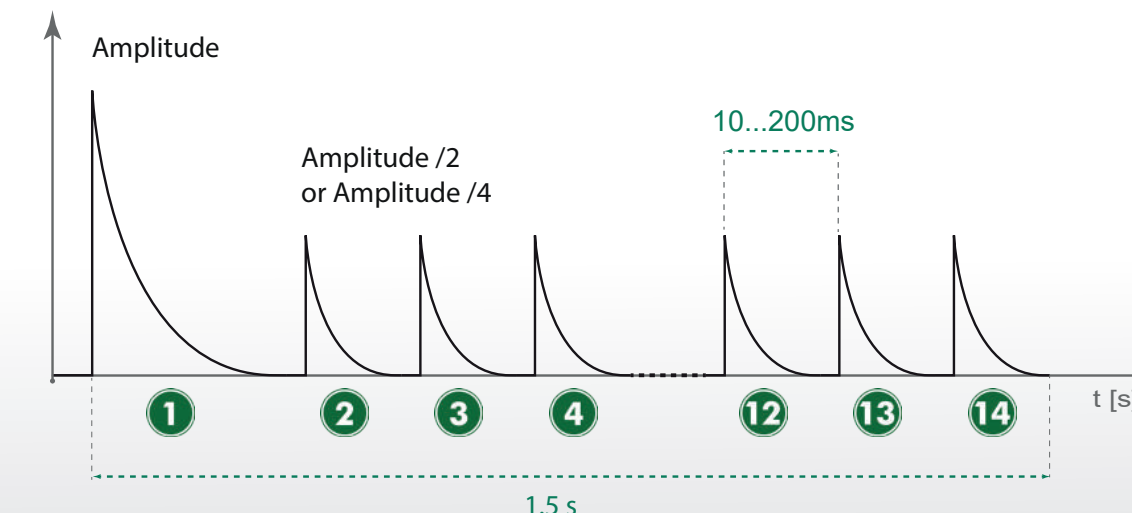
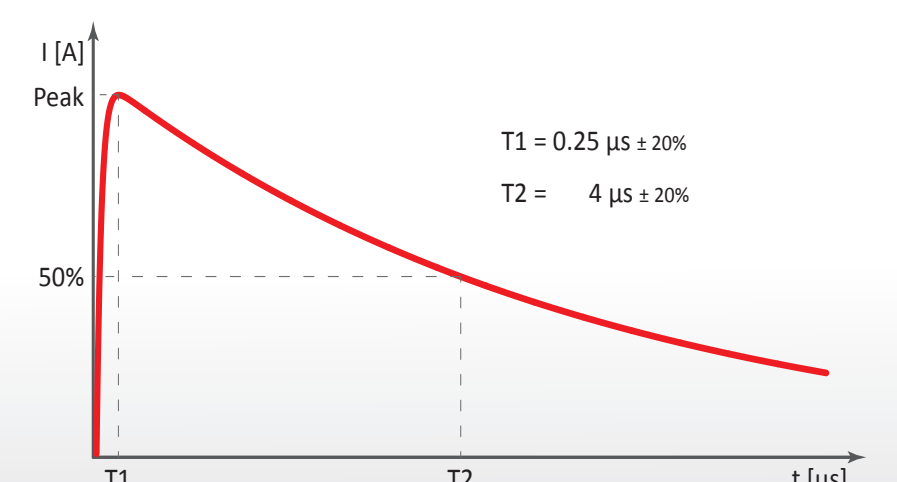
WF5A&B Cable Bundle SS		
Level	V _{Limit}	I _{Test}
1	50	150
2	125	400
3	300	1000
4	750	2000
5	1600	5000

Level	FS		SS	
	V _{Limit}	I _{Test}	V _{Limit}	I _{Test}
1	20	60	10	30
2	50	160	25	80
3	120	400	60	200
4	300	800	150	400
5	640	2000	320	1000

Level	FS		SS	
	V _{Limit}	I _{Test}	V _{Limit}	I _{Test}
1	300	1000 (300*)	75	200 (150*)
2	750	2000 (750*)	187.5	400 (375*)



WF6H



Level	Cable Bundle MB WF6H	
	V _{Limit}	I _{Test}
1	100	5
2	250	12.5
3	600	30
4	1500	75
5	3200	160

Level	Cable Bundle MB WF6H	
	V _{Limit}	I _{Test}
1	600	30
2	1500	75