Panasonic INDUSTRY

Aluminum Electrolytic Capacitors

Radial Lead Type

FS series **A** type

Features

- Endurance : 105 ℃ 5000 h to 10000 h
- Low ESR, Miniaturized (1 size smaller than series FR)
- RoHS compliant

Country of origin

- Malaysia

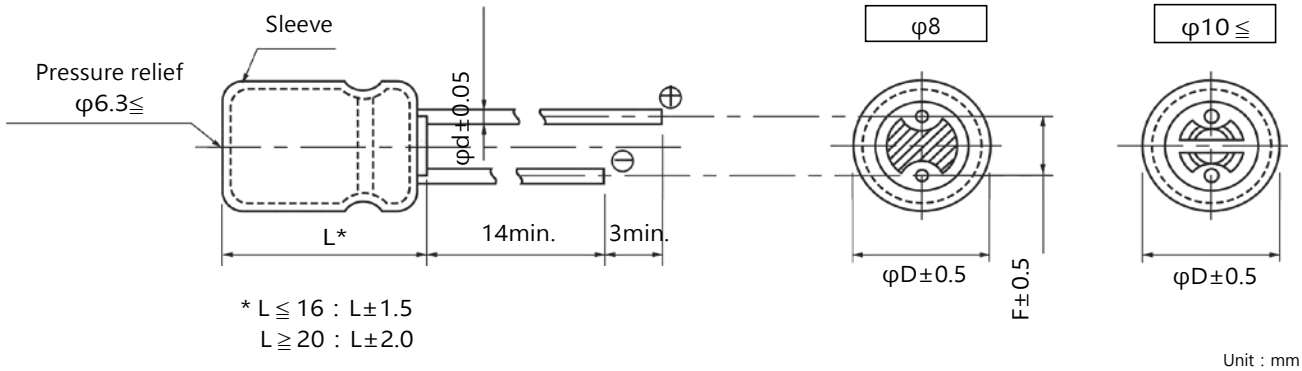
Specifications

Category temp. range	–40 ℃ to +105 ℃										
Rated voltage range	6.3 V to 100 V										
Capacitance range	27 μF to 10000 μF										
Capacitance tolerance	±20 % (120 Hz / +20℃)										
Leakage current	I ≦ 0.01 CV (μA) After 2 minutes										
Dissipation factor (tan δ)	Rated voltage (V)	6.3	10	16	25	35	50	63	80	100	(120 Hz /+20℃)
	Dissipation factor (tan δ)	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08	0.08	
	For capacitance value ≧ 1000 μF, add 0.02 per every 1000 μF.										
Endurance	After following life test with DC voltage and +105 ℃±2 ℃ ripple current value applied (The sum of DC and ripple peak voltage shall not exceed the rated working voltage) when the capacitors are restored to 20 ℃, the capacitors shall meet the limits specified bellow. Duration φ5×11, φ6.3×11.2 : 5000 h φ8×11.5, φ10×12.5 : 6000 h φ8×15, φ10×16 : 8000 h, φ8×20 : 9000 h φ10×20 to φ10×25, φ12.5×20 to φ12.5×35, φ16×20 to φ16×25 : 10000 h										
	Capacitance change	Within ±25 % of the initial value (6.3 V to 10 V : ±30 %)									
	Dissipation factor (tan δ)	≦ 200 % of the initial limit									
	DC leakage current	Within the initial limit									
Shelf life	After storage for 1000 h at +105 ℃±2 ℃ with no voltage applied and then being stabilized at +20 ℃, capacitors shall meet the limits specified in endurance. (With voltage treatment)										

Frequency correction factor for ripple current

Freq. (Hz) / Cap. (μF)	60	120	1 k	10 k	100 k to
27 to 33	0.45	0.55	0.75	0.90	1.00
47 to 330	0.60	0.70	0.85	0.95	1.00
390 to 1000	0.65	0.75	0.90	0.98	1.00
1200 to 10000	0.75	0.80	0.95	1.00	1.00

Dimensions



* L ≦ 16 : L±1.5
L ≧ 20 : L±2.0

Unit : mm

φD	5.0	6.3	8.0	10.0	12.5		16.0
L	—	—	—	—	12.5 to 25	30 to 35	—
φd	0.5	0.5	0.6	0.6	0.6	0.8	0.8
F	2.0	2.5	3.5	5.0	5.0	5.0	7.5

Case size/ Impedance/ Ripple current

R. voltage / Case size (mm) (φD×L)	6.3 V to 35 V			50 V		
	Impedance*1 (Ω)		Ripple current*1 (mA rms)	Impedance*1 (Ω)		Ripple current*1 (mA rms)
	+20 ℃	-10 ℃	+105 ℃	+20 ℃	-10 ℃	+105 ℃
5 × 11	0.300	1.000	280	0.340	1.130	250
6.3 × 11.2	0.130	0.430	455	—	—	—
8 × 11.5	0.056	0.168	950	—	—	—
8 × 15	0.041	0.123	1240	0.045	0.135	1140
8 × 20	0.030	0.090	1560	0.033	0.099	1430
10 × 12.5	0.043	0.114	1290	—	—	—
10 × 16	0.028	0.078	1790	—	—	—
10 × 20	0.020	0.057	2180	0.023	0.069	1890
10 × 25	0.018	0.054	2470	0.022	0.066	2150
12.5 × 20	0.018	0.045	2600	—	—	—
12.5 × 25	0.015	0.038	3190	0.018	0.045	2660
12.5 × 30	0.013	0.033	3630	0.016	0.040	3160
12.5 × 35	0.012	0.030	3750	0.014	0.035	3270
16 × 20	0.017	0.043	3300	—	—	—
16 × 25	0.014	0.035	3820	0.016	0.040	3320

R. voltage / Case size (mm) (φD×L)	63 V			80 V to 100 V		
	Impedance*1 (Ω)		Ripple current*1 (mA rms)	Impedance*1 (Ω)		Ripple current*1 (mA rms)
	+20 ℃	-10 ℃	+105 ℃	+20 ℃	-10 ℃	+105 ℃
5 × 11	0.510	2.040	175	—	—	—
6.3 × 11.2	—	—	—	—	—	—
8 × 11.5	—	—	—	0.160	0.720	490
8 × 15	0.068	0.272	741	0.112	0.504	590
8 × 20	0.050	0.200	930	0.096	0.432	810
10 × 12.5	0.063	0.252	761	0.112	0.448	600
10 × 16	0.045	0.180	1073	0.072	0.288	930
10 × 20	—	—	—	0.054	0.224	1120
10 × 25	0.033	0.132	1500	0.044	0.176	1200
12.5 × 20	0.033	0.125	1582	0.043	0.135	1400
12.5 × 25	0.027	0.092	1995	0.034	0.108	1800
12.5 × 30	—	—	—	0.030	0.099	2200
12.5 × 35	0.021	0.071	2780	0.023	0.070	2380
16 × 20	0.029	0.093	2153	0.032	0.108	1450
16 × 25	0.024	0.074	2988	0.025	0.076	2500

*1: 100 kHz

Characteristics list

Rated voltage (V)	Capacitance (±20 %) (μF)	Case size (mm)		Specification			Lead length (mm)				Part No.	Min. Packaging Q'ty (PCS)	
								Lead space					
		φD	L	Ripple current*1 (mA rms)	Impe-dance*2 (Ω)	Endu-rance (h)	Lead dia. (φd)	Straight	Taping ∗B	Taping ∗H		Straight leads	Taping
6.3	220	5.0	11.0	280	0.300	5000	0.5	2.0	5.0	2.5	EEUFS0J221( )	200	2000
	1500	8.0	15.0	1240	0.041	8000	0.6	3.5	5.0	—	EEUFS0J152L( )	200	1000
		10.0	12.5	1290	0.043	6000	0.6	5.0	5.0	—	EEUFS0J152( )	200	500
	1800	8.0	20.0	1560	0.030	9000	0.6	3.5	5.0	—	EEUFS0J182L( )	200	1000
	2000	8.0	20.0	1560	0.030	9000	0.6	3.5	5.0	—	EEUFS0J202L( )	200	1000
		10.0	16.0	1790	0.028	8000	0.6	5.0	5.0	—	EEUFS0J202( )	200	500
	2200	10.0	16.0	1790	0.028	8000	0.6	5.0	5.0	—	EEUFS0J222( )	200	500
	2700	10.0	20.0	2180	0.020	10000	0.6	5.0	5.0	—	EEUFS0J272( )	200	500
	3300	10.0	20.0	2180	0.020	10000	0.6	5.0	5.0	—	EEUFS0J332( )	200	500
	3900	10.0	25.0	2470	0.018	10000	0.6	5.0	5.0	—	EEUFS0J392L( )	200	500
	4700	12.5	20.0	2600	0.018	10000	0.6	5.0	5.0	—	EEUFS0J472( )	200	500
	5100	12.5	25.0	3190	0.015	10000	0.6	5.0	5.0	—	EEUFS0J512( )	200	500
	5600	12.5	25.0	3190	0.015	10000	0.6	5.0	5.0	—	EEUFS0J562( )	200	500
	6200	12.5	30.0	3630	0.013	10000	0.8	5.0	—	—	EEUFS0J622L	100	—
	6800	12.5	30.0	3630	0.013	10000	0.8	5.0	—	—	EEUFS0J682L	100	—
	7500	12.5	35.0	3750	0.012	10000	0.8	5.0	—	—	EEUFS0J752L	100	—
		16.0	20.0	3300	0.017	10000	0.8	7.5	7.5	—	EEUFS0J752S( )	100	250
	8200	12.5	35.0	3750	0.012	10000	0.8	5.0	—	—	EEUFS0J822L	100	—
		16.0	20.0	3300	0.017	10000	0.8	7.5	7.5	—	EEUFS0J822S( )	100	250
	9100	16.0	25.0	3820	0.014	10000	0.8	7.5	7.5	—	EEUFS0J912( )	100	250
	10000	16.0	25.0	3820	0.014	10000	0.8	7.5	7.5	—	EEUFS0J103( )	100	250
10	180	5.0	11.0	280	0.300	5000	0.5	2.0	5.0	2.5	EEUFS1A181( )	200	2000
	330	6.3	11.2	455	0.130	5000	0.5	2.5	5.0	2.5	EEUFS1A331( )	200	2000
	820	8.0	11.5	950	0.056	6000	0.6	3.5	5.0	—	EEUFS1A821( )	200	1000
	1000	10.0	12.5	1290	0.043	6000	0.6	5.0	5.0	—	EEUFS1A102( )	200	500
	1200	8.0	15.0	1240	0.041	8000	0.6	3.5	5.0	—	EEUFS1A122L( )	200	1000
		10.0	12.5	1290	0.043	6000	0.6	5.0	5.0	—	EEUFS1A122( )	200	500
	1800	8.0	20.0	1560	0.030	9000	0.6	3.5	5.0	—	EEUFS1A182L( )	200	1000
		10.0	16.0	1790	0.028	8000	0.6	5.0	5.0	—	EEUFS1A182( )	200	500
	2000	10.0	20.0	2180	0.020	10000	0.6	5.0	5.0	—	EEUFS1A202( )	200	500
	2200	10.0	20.0	2180	0.020	10000	0.6	5.0	5.0	—	EEUFS1A222( )	200	500
	2700	10.0	25.0	2470	0.018	10000	0.6	5.0	5.0	—	EEUFS1A272L( )	200	500
	3600	12.5	20.0	2600	0.018	10000	0.6	5.0	5.0	—	EEUFS1A362( )	200	500
	4700	12.5	25.0	3190	0.015	10000	0.6	5.0	5.0	—	EEUFS1A472( )	200	500
	5100	12.5	30.0	3630	0.013	10000	0.8	5.0	—	—	EEUFS1A512L	100	—
	5600	12.5	30.0	3630	0.013	10000	0.8	5.0	—	—	EEUFS1A562L	100	—
		16.0	20.0	3300	0.017	10000	0.8	7.5	7.5	—	EEUFS1A562S( )	100	250
	7500	12.5	35.0	3750	0.012	10000	0.8	5.0	—	—	EEUFS1A752L	100	—
	8200	16.0	25.0	3820	0.014	10000	0.8	7.5	7.5	—	EEUFS1A822( )	100	250

*1: Ripple current (100 kHz / +105 ℃)
*2: Impedance (100 kHz / +20 ℃)

- When requesting taped product, please put the letter "B" or "H" be tween the "( )".
  Lead wire pitch ∗B=5 mm, 7.5 mm, H=2.5 mm.
- Please refer to the page of “Taping dimensions”.

Characteristics list

Rated voltage (V)	Capacitance (±20 %) (μF)	Case size (mm)		Specification			Lead length (mm)				Part No.	Min. Packaging Q'ty (PCS)	
								Lead space					
		φD	L	Ripple current*1 (mA rms)	Impe-dance*2 (Ω)	Endu-rance (h)	Lead dia. (φd)	Straight	Taping ✻B	Taping ✻H		Straight leads	Taping
16	120	5.0	11.0	280	0.300	5000	0.5	2.0	5.0	2.5	EEUFS1C121( )	200	2000
	510	8.0	11.5	950	0.056	6000	0.6	3.5	5.0	—	EEUFS1C511( )	200	1000
	820	8.0	15.0	1240	0.041	8000	0.6	3.5	5.0	—	EEUFS1C821L( )	200	1000
		10.0	12.5	1290	0.043	6000	0.6	5.0	5.0	—	EEUFS1C821( )	200	500
	1200	8.0	20.0	1560	0.030	9000	0.6	3.5	5.0	—	EEUFS1C122L( )	200	1000
		10.0	16.0	1790	0.028	8000	0.6	5.0	5.0	—	EEUFS1C122( )	200	500
	1800	10.0	20.0	2180	0.020	10000	0.6	5.0	5.0	—	EEUFS1C182( )	200	500
	2200	10.0	25.0	2470	0.018	10000	0.6	5.0	5.0	—	EEUFS1C222L( )	200	500
	2400	12.5	20.0	2600	0.018	10000	0.6	5.0	5.0	—	EEUFS1C242( )	200	500
	3300	12.5	25.0	3190	0.015	10000	0.6	5.0	5.0	—	EEUFS1C332( )	200	500
	3600	12.5	30.0	3630	0.013	10000	0.8	5.0	—	—	EEUFS1C362L	100	—
	3900	12.5	30.0	3630	0.013	10000	0.8	5.0	—	—	EEUFS1C392L	100	—
	4700	16.0	20.0	3300	0.017	10000	0.8	7.5	7.5	—	EEUFS1C472S( )	100	250
	5100	12.5	35.0	3750	0.012	10000	0.8	5.0	—	—	EEUFS1C512L	100	—
	6200	16.0	25.0	3820	0.014	10000	0.8	7.5	7.5	—	EEUFS1C622( )	100	250
25	1200	10.0	20.0	2180	0.020	10000	0.6	5.0	5.0	—	EEUFS1E122( )	200	500
	2200	12.5	25.0	3190	0.015	10000	0.6	5.0	5.0	—	EEUFS1E222( )	200	500
	3300	12.5	35.0	3750	0.012	10000	0.8	5.0	—	—	EEUFS1E332L	100	—
	3900	16.0	25.0	3820	0.014	10000	0.8	7.5	7.5	—	EEUFS1E392( )	100	250
35	330	8.0	15.0	1240	0.041	8000	0.6	3.5	5.0	—	EEUFS1V331L( )	200	1000
	820	10.0	20.0	2180	0.020	10000	0.6	5.0	5.0	—	EEUFS1V821( )	200	500
	1000	10.0	25.0	2470	0.018	10000	0.6	5.0	5.0	—	EEUFS1V102L( )	200	500
	1500	12.5	25.0	3190	0.015	10000	0.6	5.0	5.0	—	EEUFS1V152( )	200	500
	1800	16.0	20.0	3300	0.017	10000	0.8	7.5	7.5	—	EEUFS1V182S( )	100	250
	2700	16.0	25.0	3820	0.014	10000	0.8	7.5	7.5	—	EEUFS1V272( )	100	250
50	27	5.0	11.0	250	0.340	5000	0.5	2.0	5.0	2.5	EEUFS1H270( )	200	2000
	150	8.0	15.0	1140	0.045	8000	0.6	3.5	5.0	—	EEUFS1H151L( )	200	1000
	220	8.0	20.0	1430	0.033	9000	0.6	3.5	5.0	—	EEUFS1H221L( )	200	1000
	330	10.0	20.0	1890	0.023	10000	0.6	5.0	5.0	—	EEUFS1H331( )	200	500
	390	10.0	25.0	2150	0.022	10000	0.6	5.0	5.0	—	EEUFS1H391L( )	200	500
	680	12.5	25.0	2660	0.018	10000	0.6	5.0	5.0	—	EEUFS1H681( )	200	500
	820	12.5	30.0	3160	0.016	10000	0.8	5.0	—	—	EEUFS1H821L	100	—
	1000	12.5	35.0	3270	0.014	10000	0.8	5.0	—	—	EEUFS1H102L	100	—
	1200	16.0	25.0	3320	0.016	10000	0.8	7.5	7.5	—	EEUFS1H122( )	100	250
63	27	5.0	11.0	175	0.510	5000	0.5	2.0	5.0	2.5	EEUFS1J270( )	200	2000
	120	8.0	15.0	741	0.068	8000	0.6	3.5	5.0	—	EEUFS1J121L( )	200	1000
		10.0	12.5	761	0.063	6000	0.6	5.0	5.0	—	EEUFS1J121( )	200	500
	180	8.0	20.0	930	0.050	9000	0.6	3.5	5.0	—	EEUFS1J181L( )	200	1000
		10.0	16.0	1073	0.045	8000	0.6	5.0	5.0	—	EEUFS1J181( )	200	500
	330	10.0	25.0	1500	0.033	10000	0.6	5.0	5.0	—	EEUFS1J331L( )	200	500
	390	12.5	20.0	1582	0.033	10000	0.6	5.0	5.0	—	EEUFS1J391( )	200	500
	560	12.5	25.0	1995	0.027	10000	0.6	5.0	5.0	—	EEUFS1J561( )	200	500
	680	16.0	20.0	2153	0.029	10000	0.8	7.5	7.5	—	EEUFS1J681S( )	100	250
	820	12.5	35.0	2780	0.021	10000	0.8	5.0	—	—	EEUFS1J821L	100	—
	1000	16.0	25.0	2988	0.024	10000	0.8	7.5	7.5	—	EEUFS1J102( )	100	250

*1: Ripple current (100 kHz / +105 ℃)

*2: Impedance (100 kHz / +20 ℃)

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  Lead wire pitch ✻B=5 mm, 7.5 mm, H=2.5 mm.
- Please refer to the page of “Taping dimensions”.

Characteristics list

Rated voltage (V)	Capacitance (±20 %) (μF)	Case size (mm)		Specification			Lead length (mm)			Part No.	Min. Packaging Q'ty (PCS)	
								Lead space				
		φD	L	Ripple current*1 (mA rms)	Impe-dance*2 (Ω)	Endu-rance (h)	Lead dia. (φd)	Straight	Taping ∗B		Straight leads	Taping
80	47	8.0	11.5	490	0.160	6000	0.6	3.5	5.0	EEUFS1K470( )	200	1000
	56	8.0	11.5	490	0.160	6000	0.6	3.5	5.0	EEUFS1K560( )	200	1000
	68	8.0	15.0	590	0.112	8000	0.6	3.5	5.0	EEUFS1K680( )	200	1000
	82	8.0	15.0	590	0.112	8000	0.6	3.5	5.0	EEUFS1K820( )	200	1000
	100	8.0	20.0	810	0.096	9000	0.6	3.5	5.0	EEUFS1K101L( )	200	1000
		10.0	12.5	600	0.112	6000	0.6	5.0	5.0	EEUFS1K101( )	200	500
	120	8.0	20.0	810	0.096	9000	0.6	3.5	5.0	EEUFS1K121L( )	200	1000
	150	10.0	16.0	930	0.072	8000	0.6	5.0	5.0	EEUFS1K151( )	200	500
	180	10.0	20.0	1120	0.054	10000	0.6	5.0	5.0	EEUFS1K181( )	200	500
	220	10.0	20.0	1120	0.054	10000	0.6	5.0	5.0	EEUFS1K221( )	200	500
		10.0	25.0	1200	0.044	10000	0.6	5.0	5.0	EEUFS1K221L( )	200	500
	270	10.0	25.0	1200	0.044	10000	0.6	5.0	5.0	EEUFS1K271L( )	200	500
		12.5	20.0	1400	0.043	10000	0.6	5.0	5.0	EEUFS1K271( )	200	500
	390	12.5	25.0	1800	0.034	10000	0.6	5.0	5.0	EEUFS1K391( )	200	500
	470	12.5	30.0	2200	0.030	10000	0.8	5.0	—	EEUFS1K471L( )	100	—
		16.0	20.0	1450	0.032	10000	0.8	7.5	7.5	EEUFS1K471S( )	100	250
	560	12.5	35.0	2380	0.023	10000	0.8	5.0	—	EEUFS1K561L( )	100	—
	680	16.0	25.0	2500	0.025	10000	0.8	7.5	7.5	EEUFS1K681( )	100	250
100	27	8.0	11.5	490	0.160	6000	0.6	3.5	5.0	EEUFS2A270( )	200	1000
	33	8.0	11.5	490	0.160	6000	0.6	3.5	5.0	EEUFS2A330( )	200	1000
	39	8.0	15.0	590	0.112	8000	0.6	3.5	5.0	EEUFS2A390( )	200	1000
	47	8.0	15.0	590	0.112	8000	0.6	3.5	5.0	EEUFS2A470L( )	200	1000
		10.0	12.5	600	0.112	6000	0.6	5.0	5.0	EEUFS2A470( )	200	500
	56	8.0	20.0	810	0.096	9000	0.6	3.5	5.0	EEUFS2A560L( )	200	1000
	68	8.0	20.0	810	0.096	9000	0.6	3.5	5.0	EEUFS2A680L( )	200	1000
		10.0	16.0	930	0.072	8000	0.6	5.0	5.0	EEUFS2A680( )	200	500
	120	10.0	20.0	1120	0.054	10000	0.6	5.0	5.0	EEUFS2A121( )	200	500
		10.0	25.0	1200	0.044	10000	0.6	5.0	5.0	EEUFS2A121L( )	200	500
	150	10.0	25.0	1200	0.044	10000	0.6	5.0	5.0	EEUFS2A151L( )	200	500
		12.5	20.0	1400	0.043	10000	0.6	5.0	5.0	EEUFS2A151( )	200	500
	180	12.5	25.0	1800	0.034	10000	0.6	5.0	5.0	EEUFS2A181( )	200	500
	220	12.5	25.0	1800	0.034	10000	0.6	5.0	5.0	EEUFS2A221( )	200	500
	270	12.5	30.0	2200	0.030	10000	0.8	5.0	—	EEUFS2A271L( )	100	—
		16.0	20.0	1450	0.032	10000	0.8	7.5	7.5	EEUFS2A271S( )	100	250
	330	12.5	35.0	2380	0.023	10000	0.8	5.0	—	EEUFS2A331L( )	100	—
	390	16.0	25.0	2500	0.025	10000	0.8	7.5	7.5	EEUFS2A391( )	100	250

*1: Ripple current (100 kHz / +105 ℃)
*2: Impedance (100 kHz / +20 ℃)

- When requesting taped product, please put the letter "B" be tween the "( )".
  Lead wire pitch ∗B=5 mm, 7.5 mm.
- Please refer to the page of “Taping dimensions”.

*XiGHOiQHV DQG SUHFDXWiRQV UHJDUGiQJ WKH WHFKQiFDO iQIRUPDWiRQ DQG XVH RI RXU SURGXFWV GHVFUiEHG iQ WKiV RQOiQH FDWDORJ.

☐ II \RX ZDQW WR XVH RXU SURGXFWV GHVFUiEHG iQ WKiV RQOiQH FDWDORJ IRU DSSOiFDWiRQV UHTXiUiQJ VSHFiDO TXDOiWiHV RU UHOiDEiOiW\, RU IRU DSSOiFDWiRQV ZKHUH WKH IDiOXUH RU PDOIXQFWiRQ RI WKH SURGXFWV PD\ GiUHFWO\ jHRSDUGi]H KXPDQ 0iIH RU SRWHQWiDO\ FDXVH SHUVRQDO iQjXU\ (H.J. DiUFUDIW DQG DHURVSDFH HTXiSPHQW, WUDIIiF DQG WUDQVSRUWDWiRQ HTXiSPHQW, FRPEXVWiRQ HTXiSPHQW, PHGiFDO HTXiSPHQW, DFFiGHQW SUHYHQWiRQ, DQWi-FUiPH HTXiSPHQW, DQG/RU VDIHW\ HTXiSPHQW3, iW iV QHFHVVDU\ WR YHUiI\ ZKHWKHU WKH VSHFiliFDWiRQV RI RXU SURGXFWV iW WR VXFK DSSOiFDWiRQV. 30HDVH HQVXUH WKDW \RX Zi00 DVN DQG FKHFN ZiWK RXU iQTXiU\ GHVN DV WR ZKHWKHU WKH VSHFiliFDWiRQV RI RXU SURGXFWV iW WR VXFK DSSOiFDWiRQV XVH EHIRUH \RX XVH RXU SURGXFWV.

☐ 7KH TXDOiW\ DQG SHUIRUPDQFH RI RXU SURGXFWV DV GHVFUiEHG iQ WKiV RQOiQH FDWDORJ RQO\ DSS0\ WR RXU SURGXFWV ZKHQ XVHG iQ iVRODWiRQ. 7KHUHIRUH, SOHDVH HQVXUH \RX HYDOXDWH DQG YHUiI\ RXU SURGXFWV XQGHU WKH VSHFiliF FiUFXPVWDQFHV iQ ZKiFK RXU SURGXFWV DUH DVVHPEOHG iQ \RXU RZQ SURGXFWV DQG iQ ZKiFK RXU SURGXFWV Zi00 DFWXD00\ EH XVHG.

☐ II \RX XVH RXU SURGXFWV iQ HTXiSPHQW WKDW UHTXiUHV D KiJK GHJUHH RI UHOiDEiOiW\, UHJDUGOHVV RI WKH DSSOiFDWiRQ, iW iV UHFRPPHQGHG WKDW \RX VHW XS SURWHFWiRQ FiUFXiWV DQG UHGXQGDQF\ FiUFXiWV iQ RUGHU WR HQVXUH VDIHW\ RI \RXU HTXiSPHQW.

☐ 7KH SURGXFWV DQG SURGXFW VSHFiliFDWiRQV GHVFUiEHG iQ WKiV RQOiQH FDWDORJ DUH VXEjHFW WR FKDQJH IRU iPSURYHPHQW ZiWKRXW SUiRU QRWiFH. 7KHUHIRUH, SOHDVH EH VXUH WR UHTXHVW DQG FRQiUP WKH 0DWHVW SURGXFW VSHFiliFDWiRQV ZKiFK H[SODiQ WKH VSHFiliFDWiRQV RI RXU SURGXFWV iQ GHWDi0, EHIRUH \RX IiQD0i]H WKH GHViJQ RI \RXU DSS0iFDWiRQV, SXUFKDVH, RU XVH RXU SURGXFWV.

☐ 7KH WHFKQiFDO iQIRUPDWiRQ iQ WKiV RQOiQH FDWDORJ SURYiGHV H[DPS0HV RI RXU SURGXFWV' W\SiFD0 RSHUDWiRQV DQG DSS0iFDWiRQ FiUFXiWV. :H GR QRW JXDUDQWHH WKH QRQ-iQIUiQJHPHQW RI WKiUG SDUW\'V iQWH00HFWXD0 SURSHUW\ UiJKWV DQG ZH GR QRW JUDQW DQ\ 0iFHQVH, UiJKW, RU iQWHUHVW iQ RXU iQWH00HFWXD0 SURSHUW\.

☐ II DQ\ RI RXU SURGXFWV, SURGXFW VSHFiliFDWiRQV DQG/RU WHFKQiFD0 iQIRUPDWiRQ iQ WKiV RQOiQH FDWDORJ iV WR EH H[SRUWHG RU SURYiGHG WR QRQ-UHViGHQWV, WKH ODZV DQG UHJX0DWiRQV RI WKH H[SRUWiQJ FRXQWU\, HVSHFiD00\ ZiWK UHJDUG WR VHFXUiW\ DQG H[SRUW FRQWURO, VKD00 EH REVHUYHG.

<5HJDUGiQJ WKH &HUWiliFDWH RI &RPS0iDQFH ZiWK WKH (8 5R+6 DiUHFWiYH/5($&+ 5HJX0DWiRQV!

☐ 7KH VZiWFKRYHU GDWH IRU FRPS0iDQFH ZiWK WKH 5R+6 DiUHFWiYH/5($&+ 5HJX0DWiRQV YDUiHV GHSHQGiQJ RQ WKH SDUW QXPEHU RU VHUiHV RI RXU SURGXFWV.

☐ :KHQ \RX XVH WKH iQYHQWRU\ RI RXU SURGXFWV IRU ZKiFK iW iV XQF0HDU ZKHWKHU WKRVH SURGXFWV DUH FRPS0iDQW ZiWK WKH 5R+6 DiUHFWiYH/5($&+ 5HJX0DWiRQ, SOHDVH VHOHFW "6D0HV IQTXiU\" iQ WKH ZHEViWH iQTXiU\ IRUP DQG FRQWDFW XV.

=H GR QRW WDNH DQ\ UHVSRQViEi0iW\ IRU WKH XVH RI RXU SURGXFWV RXWViGH WKH VFRSH RI WKH VSHFiliFDWiRQV, GHVFUiSWiRQV, JXiGH0iQHV DQG SUHFDXWiRQV GHVFUiEHG iQ WKiV RQOiQH FDWDORJ.

1RWiFHV

□ $SS0iFDE0H 0DZV DQG UHJXODWiRQV

嶋7KiV SURGXFW FRPS0iHV ZiWK WKH 5R+6 DiUHFWiYH (5HVWUiFWiRQ RI WKH XVH RI FHUWDiQ KD]DUGRXV VXEVWDQFHV iQ HOHFWUiFDO DQG HOHFWURQiF HTXiSPHQW (DI5(&7I9(2011/65/(8 DQG ق(832015/86333.

- 1R 2]RQH DHS0HWiQJ &KHPiFDOV(2D&'V3, FRQWUROOHG XQGHU WKH 0RQWUHDO 3URWRFRO $JUHHPHQW, DUH XVHG iQ SURGXFiQJ WKiV SURGXFW.
  :H GR QRW XVH 3%%V RU 3%D(V DV EURPiQDWHG I0DPH UHWDUGDQWV.
- ([SRUW SURFHGXUH ZKiFK IROORZHG H[SRUW UHODWHG UHJXODWiRQV, VXFK DV IRUHiJQ H[FKDQJH DQG D IRUHiJQ WUDGH PHWKRG, RQ WKH RFFDViRQ RI H[SRUW RI WKiV SURGXFW.
- 7KHVH SURGXFWV DUH QRW GDQJHURXV JRRGV RQ WKH WUDQVSRUWDWiRQ DV iGHQWiiHG E\ 81(8QiWHG 1DWiRQV3 QXPEHUV RU 81 FODVViIiFDWiRQ.

□ /iPiWHG DSS0iFDWiRQV

- 7KiV FDSDFiWRU iV GHViJQHG WR EH XVHG IRU HOHFWURQiFV FiUFXiWV VXFK DV DXGiR/YiVXDO HTXiSPHQW, KRPH DSS0iDQFHV, FRPSXWHUV DQG RWKHU RIIiFH HTXiSPHQW, RSWiFDO HTXiSPHQW, PHDVXUiQJ HTXiSPHQW.

嶋 +iJK UHOiDEiOiW\ DQG VDIHW\ DUH UHTXiUHG > EH / D SRVViEiOiW\ WKDW iQFRUUHFW RSHUDWiRQ RI WKiV SURGXFW PD\ GR KDUP WR D KXPDQ 0iH RU SURSHUW\ @ PRUH. :KHQ XVH iV FRQViGHUHG E\ WKH XVH, WKH GH0iYHU\ VSHFiiFDWiRQV ZKiFK VXiWHG WKH XVH VHSDUDWHO\ QHHG WR EH H[FKDQJHG.

□ IQWHO0HFWXD0 SURSHUW\ UiJKWV DQG 0iFHQVHV

- 7KH WHFKQiFD0 iQIRUPDWiRQ iQ WKiV VSHFiIiFDWiRQ SURYiGHV H[DPS0HV RI RXU SURGXFWV' W\SiFD0 RSHUDWiRQV DQG DSS0iFDWiRQ FiUFXiWV. :H GR QRW JXDUDQWHH WKH QRQ-iQIUiQJHPHQW RI WKiUG SDUW\'V iQWHOOHFWXD0 SURSHUW\ UiJKWV DQG ZH GR QRW JUDQW DQ\ 0iFHQVH, UiJKW, RU iQWHUHVW iQ RXU iQWHOOHFWXD0 SURSHUW\.

IWHPV WR EH REVHUYHG

□)RU VSHFiIiFDWiRQ

- 7KiV VSHFiIiFDWiRQ JXDUDQWHHV WKH TXD0iW\ DQG SHUIRUPDQFH RI WKH SURGXFW DV iQGiYiGXD0 FRPSRQHQWV. 7KH GXUDEiOiW\ GiIIHUV GHSHQGiQJ RQ WKH HQYiURQPHQW DQG WKH FRQGiWiRQV RI XVDJH. %HIRUH XVH, FKHFN DQG HYDOXDWH WKHiU FRPSDWiEiOiW\ ZiWK DFWXD0 FRQGiWiRQV ZKHQ iQVWDOOHG iQ WKH SURGXFWV. :KHQ VDIHW\ UHTXiUHPHQWV FDQQRW EH VDWiVIiHG iQ \RXU WHFKQiFD0 H[PiQDWiRQ, iQIRUP XV iPPHGiDWHO\.

嶋 DR QRW XSH WKH SURGXFWV EH\RQG WKH VSHFiIiFDWiRQV GHVFUiEHG iQ WKiV GRFXPHQW.

□ 8SRQ DSS0iFDWiRQ WR SURGXFWV ZKHUH VDIHW\ iV UHJDUGHG DV iPSRUWDQW

IQVWD0O WKH IROORZiQJ V\VWHPV IRU D IDiOVDIH GHViJQ WR HQVXUH VDIHW\ iI WKHVH SURGXFWV DUH WR EH XVHG iQ HTXiSPHQW ZKHUH D GHIHFW iQ WKHVH SURGXFWV PD\ FDXVH WKH ORVV RI KXPDQ 0iH RU RWKHU ViJQiIiFDWiRQ GPDJH, VXFK DV GPDJH WR YHKiFOHV (DXWRPREiOH, WUDiQ, YHVVH03, WUDIIiF 0iJKWV, PHGiFD0 HTXiSPHQW, DHURVSDFH HTXiSPHQW, HOHFWUiF KHDWiQJ DSS0iDQFHV, FRPEXVWiRQ/ JDV HTXiSPHQW, URWDWiQJ URWDWiQJ HTXiSPHQW, DQG GiVDVWHU/FUiPH SUHYHQWiRQ HTXiSPHQW.

(13 7KH V\VWHP iV HTXiSSHG ZiWK D SURWHFWiRQ FiUFXiW DQG SURWHFWiRQ GHYiFH.
(23 7KH V\VWHP iV HTXiSSHG ZiWK D UHGXQGDQW FiUFXiW RU RWKHU V\VWHP WR SUHYHQW DQ XQVDIH VWDWXV iQ WKH HYHQW RI D ViQJOH IDXOW.

□ &RQGiWiRQV RI XVH

- %HIRUH XViQJ WKH SURGXFWV, FDUHIX0O\ FKHFN WKH HIIHFWV RQ WKHiU TXD0iW\ DQG SHUIRUPDQFH, DQG GHWHUPiQHG ZKHWKHU RU QRW WKH\ FDQ EH XVHG. 7KHVH SURGXFWV DUH GHViJQHG DQG PDQXIDFWXUHG IRU JHQHUDO-SXUSRVH DQG VWDQGDUG XVH iQ JHQHUDO HOHFWURQiF HTXiSPHQW. 7KHVH SURGXFWV DUH QRW iQWHQGHG IRU XVH iQ WKH IROORZiQJ VSHFiD0 FRQGiWiRQV.
  (13 IQ 0iTXiG, VXFK DV :DWHU, 2i0, &KHPiFDOV, RU 2UJDQiF VROYHQW.
  (23 IQ GiUHFW VXQ0iKW, RXWGRRV, RU iQ GXV.
  (33 IQ YDSRU, VXFK DV GHZ FRQGHQVDWiRQ ZDWHU RI UHViVWiYH HOHPHQW, RU ZDWHU OHDNDJH, VDOW\ DiU, RU DiU ZiWK D KiJK FRQFHQWUDWiRQ FRUURViYH JDV, VXFK DV &02, +26, 1+3, 6222, RU 12[.
  (43 IQ DQ HQYiURQPHQW ZKHUH VWURQJ VWDWiF HOHFWUiFiW\ RU HOHFWURPDJQHWiF ZDYHV H[iVW.
  (53 ORXQWiQJ RU SODFiQJ KHD-JHQHUDWiQJ FRPSRQHQWV RU iQIODPPDEOHV, VXFK DV YiQ\O-FRDWHG ZiUHV, QHDU WKHVH SURGXFWV.
  (63 6HDOiQJ RU FRDWiQJ RI WKHVH SURGXFWV RU D SUiQWHG FiUFXiW ERUG RQ ZKiFK WKHVH SURGXFWV DUH PRXQWHG, ZiWK UHViQ DQG RWKHU PDWHUiDO.
  (73 8ViQJ UHVROYHQW, ZDWHU RU ZDWHU-VROXEOH FOHDQHU IRU IOX[FOHDQiQJ DJHQW DIWHU VROGHUiQJ. (IQ SDUWiFXODU, ZKHQ XViQJ ZDWHU RU D ZDWHU-VROXEOH FOHDQiQJ DJHQW, EH FDUHIX0 QRW WR OHDYH ZDWHU UHViGXHV3
  (83 8ViQJ iQ WKH DWPRVSKHUH ZKHUH VWUD\V DFiG RU DONDOiQH.
  (93 8ViQJ iQ WKH DWPRVSKHUH ZKHUH WKHUH DUH H[FHVViYH YiEUDWiRQ DQG VKRFN.

嶋 30HDVH DUUDQJH FiUFXiW GHViJQ IRU SUHYHQWiQJ iPSXOVH RU WUDQViWiRQDO YROWDJH.
DR QRW DSS0\ YROWDJH, ZKiFK H[FHHGV WKH IX00 UDWHG YROWDJH ZKHQ WKH FDSDFiWRUV UHFHiYH iPSXOVH YROWDJH, iQVWDQWDQHRXV KiJK YROWDJH, KiJK SXOVH YROWDJH HWF.

- 2XU SURGXFWV WKHUH iV D SURGXFW DUH XViQJ DQ HOHFWURO\WH VROXWiRQ. 7KHUHIRUH, PiVXVH FDQ UHVXOW iQ UDSiG GHWHUiRUDWiRQ RI FKDUDFWHUiVWiFV DQG IXQFWiRQV RI HDFK SURGXFW. (OHFWURO\WH OHDNDJH GPDJHV SUiQWHG FiUFXiW DQG DIHFWV SHUIRUPDQFH, FKDUDFWHUiVWiFV, DQG IXQFWiRQV RI FXVWRPHU V\VWHP.

⚠$SSOiFDWiRQ JXiGH0iQHV ق5DGiDO 0HDG 7\SH ك

1. &iUFXiW GHViJQ

1.1 2SHUDWiQJ WHPSHUDWXUH DQG IUHTXHQF\

(OHFWUiFDO FKDUDFWHUiVWiFV RI WKH FDSDFiWRU DUH OiNHO\ WR FKDQJH GXH WR YDUiDWiRQ iQ WHPSHUDWXUH DQG/RU IUHTXHQF\. &iUFXiW GHViJQHUV VKRXOG WDNH WKHVH FKDQJHV iQWR FRQViGHUDWiRQ.

(13 (IIHFWV RI RSHUDWiQJ WHPSHUDWXUH RQ HOHFWUiFDO SDUDPHWHUV

$W KiJKHU WHPSHUDWXUHV : OHDNDJH FXUUHQW DQG FDSDFiWDQFH iQFUHDVH ZKiOH HTXiYDOHQW VHUiHV UHViVWDQFH ((653 GHFUHDVHV.

$W ORZHU WHPSHUDWXUHV : OHDNDJH FXUUHQW DQG FDSDFiWDQFH GHFUHDVH ZKiOH HTXiYDOHQW VHUiHV UHViVWDQFH ((653 iQFUHDVHV.

(23 (IIHFWV RI IUHTXHQF\ RQ HOHFWUiFDO SDUDPHWHUV

$W KiJKHU IUHTXHQFiHV : FDSDFiWDQFH DQG iPSHGDQFH GHFUHDVH ZKiOH WDQ G iQFUHDVHV.

$W ORZHU IUHTXHQFiHV : KHDW JHQHUDWHG E\ UiSSOH FXUUHQW ZiOO UiVH GXH WR DQ iQFUHDVH iQ HTXiYDOHQW VHUiHV UHViVWDQFH ((653.

1.2 2SHUDWiQJ WHPSHUDWXUH DQG 0iIH H[SHFWDQF\

(13 ([SHFWHG 0iIH iV DIIHFWHG E\ RSHUDWiQJ WHPSHUDWXUH. *HQHUDO0\, HDFK 10 ℃ UHGXFWiRQ iQ WHPSHUDWXUH ZiOO GRXEOH WKH H[SHFWHG 0iIH. 8VH FDSDFiWRUV DW WKH ORZHVW SRVViEOH WHPSHUDWXUH EHORZ WKH XSSHU FDWHJRU\ WHPSHUDWXUH.

(23 II RSHUDWiQJ WHPSHUDWXUHV H[FHHG WKH XSSHU FDWHJRU\ 0iPiW, UDSiG GHWHUiRUDWiRQ RI HOHFWUiFDO SDUDPHWHU ZiOO RFFXU DQG iUUHYHUViEOH GPDJH ZiOO UHVXOW.

&KHFN IRU WKH PD[iPXP FDSDFiWRU RSHUDWiQJ WHPSHUDWXUHV iQF0XGiQJ DPEiHQW WHPSHUDWXUH, iQWHUQDO FDSDFiWRU WHPSHUDWXUH UiVH GXH WR UiSSOH FXUUHQW, DQG WKH HIIHFWV RI UDGiDWHG KHDW IURP SRZHU WUDQViVWRUV, I&'V RU UHViVWRUV.

$YRiG SODFiQJ FRPSRQHQWV, ZKiFK FRXOG FRQGXFW KHDW WR WKH FDSDFiWRU IURP WKH EDFN ViGH RI WKH FiUFXiW ERDUG.

(33 7KH IRUPXOD IRU FDOFXODWiQJ H[SHFWHG 0iIH DW ORZHU RSHUDWiQJ WHPSHUDWXUHV iV DV IROORZV ;

$$/2 = /1 \times 2^{\frac{71-72}{10}}$$

/1 ⁉XDUDQWHHG 0iIH (K3 DW WHPSHUDWXUH, 71 ℃

/2 ⁉([SHFWHG 0iIH (K3 DW WHPSHUDWXUH, 72 ℃

71 ⁉8SSHU FDWHJRU\ WHPSHUDWXUH + WHPSHUDWXUH UiVH GXH WR UDWHG UiSSOH FXUUHQW (℃

72 ⁉$FWXDO RSHUDWiQJ WHPSHUDWXUH, DPEiHQW WHPSHUDWXUH + WHPSHUDWXUH UiVH GXH WR UiSSOH FXUUHQW (℃

(43 8ViQJ WKH FDSDFiWRU EH\RQG WKH HVWiPDWHG 0iIHWiPH ZiOO UHVXOW iQ VKRUW FiUFXiW, HOHFWURO\WH OHDN, YHQW RSHQ, DQG ODUJH GHWHUiRUDWiRQ RI FKDUDFWHUiVWiFV. 7KH 0iIHWiPH FDQQRW JR DERYH 15 \HDUV GXH WR DJiQJ RI VHDOiQJ UXEEHU.

1.3 &RPPRQ DSSOiFDWiRQ FRQGiWiRQV WR DYRiG

7KH IROORZiQJ PiVDSSOiFDWiRQ ORDG FRQGiWiRQV ZiOO FDXVH UDSiG GHWHUiRUDWiRQ RI D FDSDFiWRUbV HOHFWUiFDO SDUDPHWHUV. IQ DGGiWiRQ, UDSiG KHDWiQJ DQG JDV JHQHUDWiRQ ZiWKiQ WKH FDSDFiWRU FDQ RFFXU, FDXViQJ WKH SUHVVXUH UHOiHI YHQW WR RSHUDWH DQG UHVXOWDQW OHDNDJH RI HOHFWURO\WH. 8QGHU H[WUHPH FRQGiWiRQV, H[SORViRQ DQG IiUH iJQiWiRQ FRXOG UHVXOW. 7KH OHDNHG HOHFWURO\WH iV FRPPXVWiEOH DQG HOHFWUiFDOO\ FRQGXFWiYH.

(13 5HYHUVH YROWDJH

D& FDSDFiWRUV KDYH SRODUiW\. 7KHUHIRUH, SOHDVH GR QRW DSSO\ WKH UHYHUVH YROWDJH. 9HUiI\ FRUUHFW SRODUiW\ EHIRUH iQVHUWiRQ.

)RU FiUFXiWV ZiWK FKDQJiQJ RU XQFHUWDiQ SRODUiW\, XVH D& EiSRODU FDSDFiWRUV. D& EiSRODU FDSDFiWRUV DUH QRW VXiWDEOH IRU XVH iQ $& FiUFXiWV.

(23 &KDUJH / DiVFKDUJH DSSOiFDWiRQ

6WDQGDUG FDSDFiWRUV DUH QRW VXiWDEOH IRU XVH iQ UHSHDWiQJ FKDUJH/GiVFKDUJH DSSOiFDWiRQV.)RU FKDUJH/GiVFKDUJH DSSOiFDWiRQV, FRQVXOW XV ZiWK \RXU DFWXDO DSSOiFDWiRQ FRQGiWiRQ.

)RU UXVK FXUUHQW, SOHDVH WR QRU H[FHHG 100 $.

(33 21-2)) FiUFXiW

DR QRW XVH FDSDFiWRUV iQ FiUFXiW ZKHUH 21-2)) VZiWFKiQJ iV UHSHDWHG PRUH WKDQ 10000 WiPHV/SHU GD\. IQ FDVH RI DSSO\iQJ WR WKH WKHVHV 21-2)) FiUFXiW, FRQVXOW ZiWK XV DERXW FiUFXiW FRQGiWiRQ DQG VR RQ.

(43 2YHU YROWDJH

DR QRW DSSO\ YROWDJHV H[FHHGiQJ WKH PD[iPXP VSHFiliHG UDWHG YROWDJH. 9ROWDJHV XS WR WKH VXUJH YROWDJH UDWiQJ DUH DFFHSWDEOH IRU VKRUW SHUiRGV RI WiPH.

(QVXUH WKDW WKH VXP RI WKH D& YROWDJH DQG WKH VXSHUiPSRVHG $& UiSSOH YROWDJH GRHV QRW H[FHHG WKH UDWHG YROWDJH.

(53 5iSSOH FXUUHQW

DR QRW DSSO\ UiSSOH FXUUHQWV H[FHHGiQJ WKH PD[iPXP VSHFiliHG YDOXH.)RU KiJK UiSSOH FXUUHQW DSSOiFDWiRQV, XVH D FDSDFiWRU GHViJQHG IRU KiJK UiSSOH FXUUHQWV. IQ DGGiWiRQ, FRQVXOW XV iI WKH DSSOiHG UiSSOH FXUUHQW iV WR EH KiJKHU WKDQ WKH PD[iPXP VSHFiliHG YDOXH. (QVXUH WKDW UDWHG UiSSOH FXUUHQWV WKDW VXSHUiPSRVHG RQ ORZ D& EiDV YROWDJHV GR QRW FDXVH UHYHUVH YROWDJH FRQGiWiRQV.

(YHQ iI iW iV ZiWKiQ D UDWHG UiSSOH FXUUHQW, iQ FDVH WKH SUDFWiFD0 XVH iV RYHU WKH SUH GHVFUiEHG HQGXUDQFH 0iIHWiPH, iW FDXVHV WKH iQFUHDVH RI GHWHUiRUDWiRQ RI (65 FKDUDFWHUiVWiF DQG WKH iQWHUQDO JHQHUDWiRQ KHDW E\ UiSSOH FXUUHQW. DXH WR WKiV, WKHUH iV VRPH SRVViEiOiW\ RI YHQW RSHQ, EXOJiQJ RI VOHHYH DQG UXEEHU, HOHFWURO\WH OHDNDJH, DQG VKRW FiUFXiW, H[SORViRQ DQG iJQiWiRQ iQ WKH ZRUVW FDVH.

1.4 8ViQJ WZR RU PRUH FDSDFiWRUV iQ SDUDOOHO

(13 &DSDFiWRUV FRQQHFWHG iQ SDUDOOH0

7KH FiUFXiW UHViVWDQFH FDQ FORVH0\ DSSUR[iPDWH WKH VHUiHV UHViVWDQFH RI WKH FDSDFiWRU, FDXViQJ DQ iPEODQFH RI UiSSOH FXUUHQW ORDGV ZiWKiQ WKH FDSDFiWRUV. &DUHIX0 ZiUiQJ PHWKRGV FDQ PiQiPi]H WKH SRVViEOH DSSOiFDWiRQ RI DQ H[FHVViYH UiSSOH FXUUHQW WR D FDSDFiWRU.

(23 &DSDFiWRUV FRQQHFWHG iQ VHUiHV

DiIIHUHQFHV iQ QRUPDO D& OHDNDJH FXUUHQW DPRQJ FDSDFiWRUV FDQ FDXVH YROWDJH iPEODQFHV.

7KH XVH RI YROWDJH GiYiGHU VKXQW UHViVWRUV ZiWK FRQViGHUDWiRQ WR OHDNDJH FXUUHQWV FDQ SUHYHQW FDSDFiWRU YROWDJH iPEODQFHV.

127(: 3OHDVH GR QRW XVH iQ WKH VHUiHV iQ WKH FDVH RI FRQGXFWiYH SRO\PHU K\EUiG DOXPiQXP H0HFWURO\WiF FDSDFiWRU.

1.5 &DSDFiWRU PRXQWiQJ FRQViGHUDWiRQV

(13 DRXEOH-ViGHG FiUFXiW ERDUGV

$YRiG ZiUiQJ SDWWHUQ UXQV, ZKiFK SDVV EHWZHHQ WKH PRXQWHG FDSDFiWRU DQG WKH FiUFXiW ERDUG.

:KHQ GiSSiQJ iQWR D VROGHU EDWK, DQ H[FHVV VROGHU PD\ GHSRViW XQGHU WKH FDSDFiWRU E\ FDSiODU\ DFWiRQ, FDXViQJ VKRUW FiUFXiW EHWZHHQ DQRGH DQG FDWKRGH WHUPiQDOV.

(23 &iUFXiW %RDUG +ROH 3RViWiRQiQJ

7KH YiQ\0 VOHHYH RI WKH FDSDFiWRU FDQ EH GDPDJHG iI VROGHU SDVVHV WKURXJK D OHDG KROH iQWR WKH VXEVHTXHQW0\ SURFHVVHG SDUWV.

6SHFiD0 FDUH ZKHQ ORFDWiQJ KROH SRViWiRQV iQ SUR[iPiW\ WR FDSDFiWRUV iV UHFRPPHQGHG.

(33 &iUFXiW %RDUG +ROH 6SDFiQJ

7KH VSDFiQJ RI FiUFXiW ERDUG KROHV VKRX0G PDWFK WKH OHDG ZiUH VSDFiQJ RI FDSDFiWRUV ZiWKiQ WKH VSHFiliHG WROHUDQFHV. IQFRUUHFW VSDFiQJ FDQ FDXVH DQ H[FHVViYH OHDG ZiUH VWUHVV GXUiQJ WKH iQVHUWiRQ SURFHVV.

7KiV PD\ UHVX0W iQ SUHPDWXUH FDSDFiWRU IDiOXUH GXH WR WKH VKRUW RU RSHQ FiUFXiW, iQFUHDVHG OHDNDJH FXUUHQW, RU HOHFWURO\WH OHDNDJH.

(43 &0HDUDQFH IRU FDVH PRXQWHG SUHVVXUH UH0iHI

&DSDFiWRUV ZiWK FDVH PRXQWHG SUHVVXUH UH0iHI UHTXiUH VXIIiFiHQW FOHDUDQFH WR DOORZ IRU SURSHU SUHVVXUH UHOiHI RSHUDWiRQ.

7KH PiQiPXP F0HDUDQFH DUH GHSHQGHQW RQ FDSDFiWRU GiDPHWHUV DV IROORZV.

(DiD 10 PP WR DiD 16 PP : 2 PP PiQiPXP, DiD 18 PP : 3 PP PiQiPXP3

(53 :iUiQJ QHDU WKH SUHVVXUH UH0iHI

$YRiG ORFDWiQJ KiJK YROWDJH RU KiJK FXUUHQW ZiUiQJ RU FiUFXiW ERDUG SDWKV DERYH WKH SUHVVXUH UH0iHI.

)ODPPDEOH, KiJK WHPSHUDWXUH JDV WKDW H[FHHGV 100 ℃& PD\ EH UH0HDVHG ZKiFK FRX0G GiVVROYH WKH ZiUH iQVXODWiRQ DQG iJQiWH.

(63 &iUFXiW ERDUG SDWWHUQ XQGHU WKH FDSDFiWRU

$YRiG FiUFXiW ERDUG UXQV XQGHU WKH FDSDFiWRU, DV DQ H0HFWUiFD0 VKRUW FDQ RFFXU GXH WR DQ HOHFWUR0\WH 0HDNDJH.

(73 3OHDVH QRWH WKH UHVRQDQW DIWHU SURGXFW iPS0HPHQWDWiRQ

7KH YiFiQiW\ RI WKH UHVRQDQW SRiQW Zi00 WDNH D KHDY\ ORDG RQ WKH FDSDFiWRU.

&DSDFiWRUV FDQ FDXVH UDSiG FKDQJH iQ FKDUDFWHUiVWiFV DQG GURSRXW E\ WKiV ORDG.

1.6 (0HFWUiFD0 iVR0DWiRQ RI WKH FDSDFiWRU

&RPSOHWH0\ iVRODWH WKH FDSDFiWRU DV IROORZV.

%HWZHHQ WKH FDWKRGH DQG WKH FDVH DQG EHWZHHQ WKH DQRGH WHUPiQD0 DQG RWKHU FiUFXiW SDWKV.

1.7 &DSDFiWRU 6OHHYH

7KH YiQ\O VOHHYH RU ODPiQDWH FRDWiQJ iV iQWHQGHG IRU PDUNiQJ DQG iGHQWiIiFDWiRQ SXUSRVHV DQG iV QRW PHDQW WR HOHFWUiFDOO\ iQVXODWH WKH FDSDFiWRU.

7KH VOHHYH PD\ VSOiW RU FUDFN iI iPPHUVHG iQWR VROYHQWV VXFK DV WROXHQH RU [\OHQH DQG WKHQ VXEVHTXHQWO\ H[SRVHG WR KiJK WHPSHUDWXUHV.

2. &DSDFiWRU KDQGOiQJ WHFKQiTXHV

2.1 &RQViGHUDWiRQV EHIRUH XViQJ

(13 &DSDFiWRUV KDYH D IiQiWH OiIH. DR QRW UHXVH RU UHF\FOH FDSDFiWRUV IURP XVHG HTXiSPHQW.

(23 7UDQViHQW UHFRYHU\ YROWDJH PD\ EH JHQHUDWHG iQ WKH FDSDFiWRU GXH WR GiHOHFWUiF DEVRUSWiRQ.
II UHTXiUHG, WKiV YROWDJH FDQ EH GiVFKDUJHG ZiWK D UHViVWRU ZiWK D YDOXH RI DERXW 1 N .

(33 &DSDFiWRUV VWRUHG IRU D ORQJ SHUiRG RI WiPH PD\ H[KiEiW DQ iQFUHDVH iQ OHDNDJH FXUUHQW.
7KiV FDQ EH FRUUHFWHG E\ JUDGXDOO\ DSSO\iQJ UDWHG YROWDJH iQ VHUiHV ZiWK D UHViVWRU RI DSSUR[iPDWHO\ 1 N .

(43 II FDSDFiWRUV DUH GURSSHG, WKH\ FDQ EH GDPDJHG PHFKDQiFDOO\ RU HOHFWUiFDOO\. $YRiG XViQJ GURSSHG FDSDFiWRUV.

(53 DHQWHG RU FUXVKHG FDSDFiWRUV VKRXOG QRW EH XVHG.
7KH VHDO iQWHJUiW\ FDQ EH GDPDJHG DQG ORVV RI HOHFWURO\WH/ VKRUWHQHG OiIH FDQ UHVXOW.

2.2 &DSDFiWRU iQVHUWiRQ

(13 9HUiI\ WKH FRUUHFW FDSDFiWDQFH DQG UDWHG YROWDJH RI WKH FDSDFiWRU.

(23 9HUiI\ WKH FRUUHFW SRODUiW\ RI WKH FDSDFiWRU EHIRUH iQVHUWiRQ.

(33 9HUiI\ WKH FRUUHFW WHUPiQDO GiPHQViRQ DQG ODQG SDWWHUQ Vi]H EHIRUH PRXQW WR DYRiG VWUHVV RQ WKH WHUPiQDOV.

(43 (QVXUH WKDW WKH OHDG FOiQFKiQJ RSHUDWiRQ GRQH E\ DXWR iQVHUWiRQ HTXiSPHQWV GRHV QRW VWUHVV WKH FDSDFiWRU OHDGV ZKHUH WKH\ HQWHU WKH VHDO RI WKH FDSDFiWRU.

2.3)ORZ 6ROGHUiQJ

(13 DR QRW iPPHUVH WKH FDSDFiWRU ERG\ iQWR WKH VROGHU EDWK DV H[FHVViYH iQWHUQDO SUHVVXUH FRXOG UHVXOW.

(23 $SSO\ SURSHU VROGHUiQJ FRQGiWiRQV (WHPSHUDWXUH, WiPH, HWF.3. DR QRW H[FHHG WKH VSHFiIiHG OiPiWV.

(33 DR QRW DOORZ RWKHU SDUWV RU FRPSRQHQWV WR WRXFK WKH FDSDFiWRU GXiQJ VROGHUiQJ.

(43 5DGiDO OHDG W\SH FDSDFiWRUV DUH QRW DOORZHG IRU WKH UHIORZ VROGHUiQJ.

2.4 0DQXD0 VROGHUiQJ

(13 $SSO\ VROGHUiQJ FRQGiWiRQV (WHPSHUDWXUH DQG WiPH3 EDVHG RQ WKH VSHFiIiFDWiRQ, RU GR QRW H[FHHG WHPSHUDWXUH RI 350 ヿ IRU 3 VHFRQGV RU OHVV.

(23 II OHDG ZiUHV PXVW EH PRGiIiHG WR PHHW WHUPiQDO ERDUG KROH VSDFiQJ, DYRiG VWUHVV RQ WKH OHDG ZiUH ZKHUH iW HQWHUV WKH FDSDFiWRU VHDO.

(33 II D VROGHUHG FDSDFiWRU PXVW EH UHPRYHG DQG UHiQVHUWHG, DYRiG H[FHVViYH VWUHVV RQ WKH FDSDFiWRU OHDGV.

(43 $YRiG SK\ViFDO FRQWDFWV EHWZHHQ WKH WiS RI WKH VROGHUiQJ iURQ DQG FDSDFiWRUV WR SUHYHQW PHOWiQJ RI WKH YiQ\O VOHHYH.

2.5 2WKHU 6ROGHUiQJ &RQViGHUDWiRQV

5DSiG WHPSHUDWXUH UiVH GXUiQJ WKH SUHKHDW RSHUDWiRQ DQG UHViQ ERQGiQJ RSHUDWiRQ FDQ FDXVH FUDFNiQJ RI WKH FDSDFiWRUbV YiQ\O VOHHYH.

)RU KHDW FXUiQJ, GR QRW H[FHHG 150 ゟ& IRU WKH PD[iPXP WiPH RI 2 PiQXWHV.

2.6 &DSDFiWRU KDQGOiQJ DIWHU VROGHUiQJ

(13 $YRiG PRYiQJ WKH FDSDFiWRU DIWHU VROGHUiQJ WR SUHYHQW H[FHVViYH VWUHVV RQ WKH OHDG ZiUHV ZKHUH WKH\ HQWHU WKH VHAL. 7KH FDSDFiWRU PD\ EUHDN IURP HOHPHQW SRUWiRQ GXH WR D WRUTXH DW RXWHU UiP, FDXViQJ D ODUJH VWUHVV WR WHUPiQDOV.

(23 DR QRW XVH WKH FDSDFiWRU DV D KDQGOH ZKHQ PRYiQJ WKH FiUFXiW ERDUG DVVHPEO\. 7KH WRWDO ZHiJKW RI WKH ERDUG ZRXOG DSSO\ WR HOHPHQW SRUWiRQ WKURXJK WHUPiQDOV, DQG WKH FDSDFiWRU PD\ EUHDN.

(33 $YRiG VWUiNiQJ WKH FDSDFiWRU DIWHU DVVHPEO\ WR SUHYHQW ID0XUH GXH WR H[FHVViYH VKRFN. 7KH FDSDFiWRU PD\ EUHDN GXH WR H[FHVViYH VKRFN RU ORDG DERYH VSHFiIiHG UDQJH.

2.7 &iUFXiW ERDUG FOHDQiQJ

(13 &iUFXiW ERDUGV FDQ EH iPPHUVHG RU XOWUDVRQiFDOO\ FOHDQHG XViQJ VXiWDEOH FOHDQiQJ VROYHQWV IRU XS WR 5 PiQXWHV DQG XS WR 60 ゟ& PD[iPXP WHPSHUDWXUHV. 7KH ERDUGV VKRXOG EH WKRURXJKO\ UiQVHG DQG GUiHG. 7KH XVH RI R]RQH GHSOHWiQJ FOHDQiQJ DJHQWV iV QRW UHFRPPHQGHG IRU WKH SXUSRVH RI SURWHFWiQJ RXU HQYiURQPHQW.

岩7DUJHW VROYHQW岨

3iQH $OSKD 67-1006, $TXD &0HDQHU 2106(3, &OHDQ-WKUX 750+ / 750/ / 7100, 6XQHOHF %-12, 6XQHOHF %-12, &ROG &OHDQHU 33-375, 7HFKQR &OHDQHU 219, DK %H-FOHDU &:-5790, 7HOSHQH &0HDQHU (&-75, 7HFKQRFDUH)5:-17 /)5:-1 /)59-1

(23 $YRiG XViQJ WKH IROORZiQJ VROYHQW JURXSV XQOHVV VSHFiliFD00\ DOORZHG iQ WKH VSHFiliFDWiRQ ;

(D3 +DORJHQDWHG F0HDQiQJ VROYHQWV ᵡ H[FHSW IRU VROYHQW UHViVWDQW FDSDFiWRU W\SHV, KD0RJHQDWHG VR0YHQWV FDQ SHUPHDWH WKH VHDO DQG FDXVH iQWHUQDO FDSDFiWRU FRUURViRQ DQG IDiOXUH.

)RU VROYHQW UHViVWDQW FDSDFiWRU, FDUHIX00\ IROORZ WKH WHPSHUDWXUH DQG WiPH UHTXiUHPHQWV EDVHG RQ WKH VSHFiliFDWiRQ. 1,1,1-WUiFK0RURHWKDQH VKRX0G QHYHU EH XVHG RQ DQ\ DOXPiQXP HOHFWURO\WiF FDSDFiWRU.

(E3 $0NDOiQH VROYHQWV ᵡ FRX0G UHDFW DQG GiVVROYH WKH DOXPiQXP FDVH.

(F3 3HWUROHXP EDVHG VROYHQWV ᵡ GHWHUiRUDWiRQ RI WKH UXEEHU VHD0 FRX0G UHVX0W.

(G3 ;\OHQH ᵡ GHWHUiRUDWiRQ RI WKH UXEEHU VHD0 FRX0G UHVX0W.

(H3 $FHWRQH ᵡ UHPRYD0 RI WKH iQN PDUNiQJV RQ WKH YiQ\0 VOHHYH FRX0G UHVX0W.

(33 $ WKRURXJK GU\iQJ DIWHU F0HDQiQJ iV UHTXiUHG WR UHPRYH UHViGXD0 F0HDQiQJ VROYHQWV WKDW PD\ EH WUDSSHG EHWZHHQ WKH FDSDFiWRU DQG WKH FiUFXiW ERDUG. $YRiG GU\iQJ WHPSHUDWXUHV, ZKiFK H[FHHG WKH XSSHU FDWHJRU\ WHPSHUDWXUH RI WKH FDSDFiWRU.

(43 ORQiWRU WKH FRQWDPiQDWiRQ OHYHOV RI WKH F0HDQiQJ VROYHQWV GXUiQJ XVH iQ WHUPV RI H0HFWUiFD0 FRQGXFWiYiW\, S+, VSHFiliF JUDYiW\, RU ZDWHU FRQWHQW.

&K0RUiQH OHYHOV FDQ UiVH ZiWK FRQWDPiQDWiRQ DQG DGVHUVH0\ DIIHFW WKH SHUIRUPDQFH RI WKH FDSDFiWRU.

&RQWURO WKH IOX[GHQViW\ iQ WKH F0HDQiQJ DJHQW WR EH 0HVV WKDQ 2 PDVV%.

(53 DHSHQGiQJ RQ WKH F0HDQiQJ PHWKRG, WKH PDUNiQJ RQ D FDSDFiWRU PD\ EH HUDVHG RU EOXUUHG.

ᓬ 3HDVH FRQVX0W XV iI \RX DUH QRW FHUWDiQ DERXW DFFHSWDEOH F0HDQiQJ VROYHQWV RU F0HDQiQJ PHWKRGV.

2.8 0RXQWiQJ DGKHViYHV DQG FRDWiQJ DJHQWV

:KHQ XViQJ PRXQWiQJ DGKHViYHV RU FRDWiQJ DJHQWV WR FRQWURO KXPiGiW\, DYRiG XViQJ PDWHUiDOV FRQWDiQiQJ KD0RJHQDWHG VR0YHQWV.

$0VR, DYRiG WKH XVH RI FK0RURSUHQH EDVHG SRO\PHUV.

+DUGHQ RQ GU\ DGKHViYH RU FRDWiQJ DJHQWV ZH00 0HVW WKH VROYHQW VKRX0G EH 0HIW.

$IWHU DSSO\iQJ DGKHViYHV RU FRDWiQJV, GU\ WKRURXJK0\ WR SUHYHQW UHViGXD0 VROYHQWV IURP EHiQJ WUDSSHG EHWZHHQ WKH FDSDFiWRU DQG WKH FiUFXiW ERDUG.

2.9)XPiJDWiRQ

IQ H[SRUWiQJ H0HFWURQiF DSSOiDQFHV ZiWK DOXPiQXP H0HFWURO\WiF FDSDFiWRUV, iQ VRPH FDVHV IXPiJDWiRQ WUHDWPHQW XViQJ VXFK KDORJHQ FRPSRXQG DV PHWK\0 EURPiGH iV FRQGXFWHG IRU ZRRGHQ ER[HV.

II VXFK ER[HV DUH QRW GUiHG ZH00, WKH KDORJHQ 0HIW iQ WKH ER[iV GiVSHUVHG ZKi0H WUDQVSRUWHG DQG HQWHUV iQ WKH FDSDFiWRUV iQViGH.

7KiV SRVViEO\ FDXVHV H0HFWUiFD0 FRUURViRQ RI WKH FDSDFiWRUV. 7KHUHIRUH, DIWHU SHUFRUPiQJ IXPiJDWiRQ DQG GU\iQJ PDNH VXUH WKDW QR KDORJHQ iV 0HIW.

DRQbW SHUFRUP IXPiJDWiRQ WUHDWPHQW WR WKH ZKROH H0HFWURQiF DSSOiDQFHV SDFNHG iQ D ER[.

/HVV PRUH WKDQ 1/3 RI WKH VHDOiQJ SRUWiRQ RSHQ, DQG GR QRW FRYHU WKDW SRUWiRQ ZiWK DQ\ DGKHViYHV RU FRDWiQJ.

2.10)0X[

II \RX XVH D KDORJHQ W\SH (&K0RUiQH W\SH, %URPiQH W\SH, HWF.3 KiJK-DFWiYiW\ IOX[, SOHDVH XVH iW DIWHU FRQiUPDWiRQ iQ DGYDQFH, DV iW PD\ KDYH DQ iPSDFW RQ SHUFRUPDQFH DQG UH0iDEi0iW\ RI WKiV SURGXFW GXH WR WKH UHViGXH RI WKH IOX[.

3. 3UHFDXWiRQV IRU XViQJ FDSDFiWRUV

3.1 (QYiURQPHQWD0 FRQGiWiRQV

&DSDFiWRUV VKRX0G QRW EH VWRUHG RU XVHG iQ WKH IROORZiQJ HQYiURQPHQWV.

(13 ([SRVXUH WR WHPSHUDWXUH DERYH WKH XSSHU FDWHJRU\ RU EHORZ WKH ORZHU FDWHJRU\ WHPSHUDWXUH RI WKH FDSDFiWRU.

(23 DiUHFW FRQWDFW ZiWK ZDWHU, VDOW ZDWHU, RU RiO.

(33 +iJK KXPiGiW\ FRQGiWiRQV ZKHUH ZDWHU FRX0G FRQGHQVH RQ WKH FDSDFiWRU.

(43 ([SRVXUH WR WR[iF JDVHV VXFK DV K\GURJHQ VX0iGH, VX0iXUiF DFiG, QiWUiF DFiG, FK0RUiQH, FK0RUiQH FRPSRXQG, EURPiQH, EURPiQH FRPSRXQG RU DPPRQiD.

(53 ([SRVXUH WR R]RQH, UDGiDWiRQ, RU XOWUDYiR0HW UD\V.

(63 9iEUDWiRQ DQG VKRFN FRQGiWiRQV H[FHHGiQJ VSHFiliHG UHTXiUHPHQWV.

(YHQ ZiWKiQ WKH VSHFiliHG UHTXiUHPHQWV, D ODUJH YiEUDWiRQ DFFHOHUDWiRQ PD\ EH DSS0iHG GXH WR UHVRQDQFH, VR EH VXUH WR HYDOXDWH DQG FRQiUP ZiWK WKH DFWXD0 SURGXFW.

3.2 (0HFWUiFD0 SUHFDXWiRQV

(13 $YRiG WRXFKiQJ WKH WHUPiQD0V RI D FDSDFiWRU DV D SRVViEOH H0HFWUiF VKRFN FRX0G UHVX0W. 7KH H[SRVHG DOXPiQXP FDVH iV QRW iQVXODWHG DQG FRX0G DOVR FDXVH H0HFWUiF VKRFN iI WRXFKHG.

(23 $YRiG VKRUW FiUFXiWiQJ WKH DUHD EHWZHHQ WKH FDSDFiWRU WHUPiQD0V ZiWK FRQGXFWiYH PDWHUiD0V iQF0XGiQJ 0iTXiGV VXFK DV DFiGV RU DONDOiQH VROXWiRQV.

(33 $ ORZ-PROHFXODU-ZHiJKW-VKiUR[DQH ZKiFK iV iQF0XGHG iQ D Vi0iFRQ PDWHUiD0 VKD00 FDXVHV DEQRUPD0 H0HFWUiFD0 FKDUDFWHUiVWiFV.

4. (PHUJHQF\ SURFHGXUHV

(13 II WKH SUHVVXUH UHOiHI RI WKH FDSDFiWRU RSHUDWHV, iPPHGiDWHO\ WXUQ RII WKH HTXiSPHQW DQG GiVFRQQHFW IURP WKH SRZHU VRXUFH.

7KiV ZiOO PiQiPi]H DQ DGGiWiRQDO GDPDJH FDXVHG E\ WKH YDSRUi]iQJ HOHFWURO\WH.

(23 $YRiG FRQWDFW ZiWK WKH HVFDSiQJ HOHFWURO\WH JDV, ZKiFK FDQ H[FHHG 100 ppm WHPSHUDWXUHV.

II HOHFWURO\WH RU JDV HQWHUV WKH H\H, iPPHGiDWHO\ IOXVK WKH H\H ZiWK ODUJH DPRXQWV RI ZDWHU.

II HOHFWURO\WH RU JDV iV iQJHVWHG E\ PRXWK, JDUJOH ZiWK ZDWHU.

II HOHFWURO\WH FRQWDFWV WKH VNiQ, ZDVK ZiWK VRSS DQG ZDWHU.

5. /RQJ WHUP VWRUDJH

(13 /HDNDJH FXUUHQW RI D FDSDFiWRU iQFUHDVHV ZiWK ORQJ VWRUDJH WiPHV. 7KH DOXPiQXP R[iGH Li0P GHWHUiRUDWHV DV D IXQFWiRQ RI WHPSHUDWXUH DQG WiPH.

II XVHG ZiWKRXW UHFRQGiWiRQiQJ, DQ DEQRUPDO\ KiJK FXUUHQW ZiOO EH UHTXiUHG WR UHVWRUH WKH R[iGH LiOP.

7KiV VXUJH FXUUHQW FRXOG FDXVH WKH FiUFXiW RU WKH FDSDFiWRU WR IDi0.

([SiUDWiRQ GDWH iV 42 PRQWKV IURP RXWJRiQJ iQVSHFWiRQ GDWH.

+RZHYHU, H[SiUDWiRQ GDWH IRU VHUiHV ZKiFK DUH QRW 0iVWHG EHORZ iV 12 PRQWKV IURP RXWJRiQJ iQVSHFWiRQ GDWH.

6HUiHV	([SiUDWiRQ GDWH
)&,)K, +D, 7$, 73	42 PRQWKV IURP RXWJRiQJ iQVSHFWiRQ GDWH

)RU VWRUDJH FRQGiWiRQ, NHHS URRP WHPSHUDWXUH (5 ~ 35 ~&3 DQG KXPiGiW\ (45 % WR 85 %3 ZKHUH GiUHFW VXQVKiQH GRHVQ'W UHDFK.

ق2ك(QYiURQPHQWDO &RQGiWiRQV

DR QRW VWRUH XQGHU FRQGiWiRQ RXWViGH WKH DUHD GHVFUiEHG iQ WKH VSHFiliFDWiRQ, DQG DOVR XQGHU FRQGiWiRQV 0iVWHG EHORZ.

(D3 ([SRVXUH WR WHPSHUDWXUHV DERYH WKH XSSHU FDWHJRU\ RU EHORZ WKH ORZHU FDWHJRU\ WHPSHUDWXUH RI WKH FDSDFiWRU.

(E3 DiUHFW FRQWDFW ZiWK ZDWHU, VDOW ZDWHU, RU RiO.

(F3 +iJK KXPiGiW\ FRQGiWiRQV ZKHUH ZDWHU FRXOG FRQGHQVH RQ WKH FDSDFiWRU.

(G3 ([SRVXUH WR WR[iF JDVHV VXFK DV K\GURJHQ VXOIiGH, VXOIXUiF DFiG, QiWUiF DFiG, FKORUiQH, &KORUiQH FRPSRXQG, %URPiQH, %URPiQH FRPSRXQG RU DPPRQiD.

(H3 ([SRVXUH WR R]RQH, UDGiDWiRQ, RU XOWUDYiROHW UD\V.

(I3 9iEUDWiRQ DQG VKRFN FRQGiWiRQV H[FHHGiQJ VSHFiliHG UHTXiUHPHQWV.

6. &DSDFiWRU GiVSRVDO

:KHQ GiVSRViQJ FDSDFiWRUV, XVH RQH RI WKH IROORZiQJ PHWKRGV.

(13 IQFiQHUDWH DIWHU FUXVKiQJ WKH FDSDFiWRU RU SXQFWXUiQJ WKH FDQ ZDOO (WR SUHYHQW H[SORViRQ GXH WR iQWHUQDO SUHVVXUH UiVH3.

(23 DiVSRVH DV VROiG ZDVWH.

127(: /RFDO ODZV PD\ KDYH VHSFiliF GiVSRVDO UHTXiUHPHQWV ZKiFK PXVW EH IROORZHG.

7KH SUHFDXWiRQV iQ XViQJ D0XPiQXP HOHFWUR\WiF FDSDFiWRUV IROORZ WKH "6DIHW\ DSSOiFDWiRQ JXiGH IRU WKH XVH iQ Li[HGD0XPiQXP HOHFWUR\WiF FDSDFiWRUV IRU HOHFWURQiF HTXiSPHQW", 5&5-2367D iVVXHG E\ J(I7$ iQ 2FWREHU 2017.

3OHDVH UHIHU WR WKH DERYH DSSOiFDWiRQ JXiGH IRU GHWDi0V.