Elektronische Bauelemente

SFL2J Series CR-C

Voltage 10V~190V

200W Peak Power Surface Mount TVS

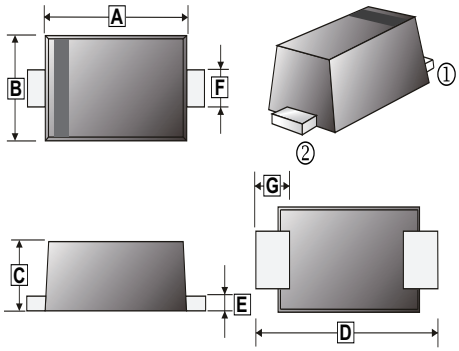
RoHS Compliant Product

A suffix of "-C" specifies halogen-free and lead-free

FEATURES

- Qualified to AEC-Q101 standards for high reliability
- Glass passivated junction
- Solder dip 260°C, 10s
- Low profile, typical thickness 1.0mm
- Moisture sensitivity: level 1, per J-STD-020
- Excellent clamping capability
- Fast response time
- 200W peak pulse power capability with a 10/1000μs waveform
- Polarity: Uni-directional

SOD-123FL



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.9	3.1	E	0.1	0.25
B	1.7	2	F	0.85	1.05
C	0.9	1.08	G	0.43	0.83
D	3.5	3.9			

PACKAGE INFORMATION

Package	MPQ	Leader Size
SOD-123FL	3K	7 inch

ORDER INFORMATION

Part Number	Type
SFL2J Series CR-C	Lead (Pb)-free and Halogen-free

MAXIMUM RATINGS (T_A=25 °C unless otherwise noted)

Parameter		Symbol	Value	Unit
Peak Power Dissipation with a 10/1000μs waveform [1]		P_{PP}	200	W
Peak Pulse Current with a 10/1000μs waveform [1]		I_{PP}	(See Next Table.)	A
Power Dissipation [2]	Steady state	P_D	0.5	W
Peak Forward Surge Current, 8.3ms single half sine-wave unidirectional only		I_{FSM}	30	A
Maximum Instantaneous Forward Clamping Voltage at 25A		V_F	3.5	V
Thermal Resistance Junction-Ambient Air		$R_{\theta JA}$	85	°C/W
Operating Junction and Storage Temperature Range		T_J, T_{STG}	-65 ~150	°C

Notes:

1. Non-repetitive current pulse per Fig.3 and derated above T_A=25°C per Fig.4.
2. Power dissipation mounted on recommended pad layout.
3. Thermal resistance from junction to ambient, mounted on PCB with 5.0×5.0mm copper pads.

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SFL2J Series CR-C

Voltage 10V~190V

200W Peak Power Surface Mount TVS

ELECTRICAL CHARACTERISTICS (Rating T_A=25°C unless otherwise specified)

Part Number	Marking Code	Reverse Stand-Off Voltage	Breakdown Voltage V_{BR} @I_T		Test Current	Maximum Reverse Leakage I_R @V_{RWM}	Maximum Peak Pulse Current	Maximum Clamping Voltage V_C @I_{PP}
			Min.	Max.				
		V_{RWM}	V_{BR}		I_T	I_R	I_{PP}	V_C
Uni	Uni	V	V	V	mA	μA	A	V
SFL2J10ACR-C	A210	10	11.1	12.3	1	5	11.8	17
SFL2J11ACR-C	A211	11	12.2	13.5	1	5	11	18.2
SFL2J12ACR-C	A212	12	13.3	14.7	1	5	10.1	19.9
SFL2J13ACR-C	A213	13	14.4	15.9	1	5	9.3	21.5
SFL2J14ACR-C	A214	14	15.6	17.2	1	5	8.62	23.2
SFL2J15ACR-C	A215	15	16.7	18.5	1	5	8.2	24.4
SFL2J16ACR-C	A216	16	17.8	19.7	1	5	7.69	26
SFL2J17ACR-C	A217	17	18.9	20.9	1	5	7.25	27.6
SFL2J18ACR-C	A218	18	20	22.1	1	5	6.85	29.2
SFL2J20ACR-C	A220	20	22.2	24.5	1	5	6.17	32.4
SFL2J22ACR-C	A222	22	24.4	26.9	1	5	5.63	35.5
SFL2J24ACR-C	A224	24	26.7	29.5	1	5	5.14	38.9
SFL2J26ACR-C	A226	26	28.9	31.9	1	5	4.75	42.1
SFL2J28ACR-C	A228	28	31.1	34.4	1	5	4.41	45.4
SFL2J30ACR-C	A230	30	33.3	36.8	1	5	4.13	48.4
SFL2J33ACR-C	A233	33	36.7	40.6	1	5	3.75	53.3
SFL2J36ACR-C	A236	36	40	44.2	1	5	3.44	58.1
SFL2J40ACR-C	A240	40	44.4	49.1	1	5	3.1	64.5
SFL2J43ACR-C	A243	43	47.8	52.8	1	5	2.88	69.4
SFL2J45ACR-C	A245	45	50	55.3	1	5	2.75	72.7
SFL2J48ACR-C	A248	48	53.3	58.9	1	5	2.58	77.4
SFL2J51ACR-C	A251	51	56.7	62.7	1	5	2.43	82.4
SFL2J54ACR-C	A254	54	60	66.3	1	5	2.3	87.1
SFL2J58ACR-C	A258	58	64.4	71.2	1	5	2.14	93.6
SFL2J60ACR-C	A260	60	66.7	73.7	1	5	2.07	96.8
SFL2J64ACR-C	A264	64	71.1	78.6	1	5	1.94	103
SFL2J70ACR-C	A270	70	77.8	86	1	5	1.77	113
SFL2J75ACR-C	A275	75	83.3	92.1	1	5	1.65	121
SFL2J78ACR-C	A278	78	86.7	95.8	1	5	1.59	126
SFL2J80ACR-C	A280	80	88.8	97.6	1	5	1.55	129

ELECTRICAL CHARACTERISTICS (Rating T_A=25°C unless otherwise specified)

Part Number	Marking Code	Reverse Stand-Off Voltage	Breakdown Voltage V_{BR} @ I_T		Test Current	Maximum Reverse Leakage I_R @V_{RWM}	Maximum Peak Pulse Current	Maximum Clamping Voltage V_C @I_{PP}
			Min.	Max.				
		V_{RWM}	V_{BR}		I_T	I_R	I_{PP}	V_C
Uni	Uni	V	V	V	mA	μA	A	V
SFL2J85ACR-C	A285	85	94.4	104	1	5	1.46	137
SFL2J90ACR-C	A290	90	100	111	1	5	1.37	146
SFL2J100ACR-C	A100	100	111	123	1	5	1.23	162
SFL2J110ACR-C	A110	110	122	135	1	5	1.13	177
SFL2J120ACR-C	A120	120	133	147	1	5	1.04	193
SFL2J130ACR-C	A130	130	144	159	1	5	0.96	209
SFL2J140ACR-C	A140	140	155	171	1	5	0.89	224
SFL2J150ACR-C	A150	150	167	185	1	5	0.82	243
SFL2J160ACR-C	A160	160	178	197	1	5	0.77	259
SFL2J170ACR-C	A170	170	189	209	1	5	0.73	275
SFL2J180ACR-C	A180	180	201	222	1	5	0.69	292
SFL2J190ACR-C	A190	190	211	232	1	5	0.62	324

RATINGS AND CHARACTERISTIC CURVES

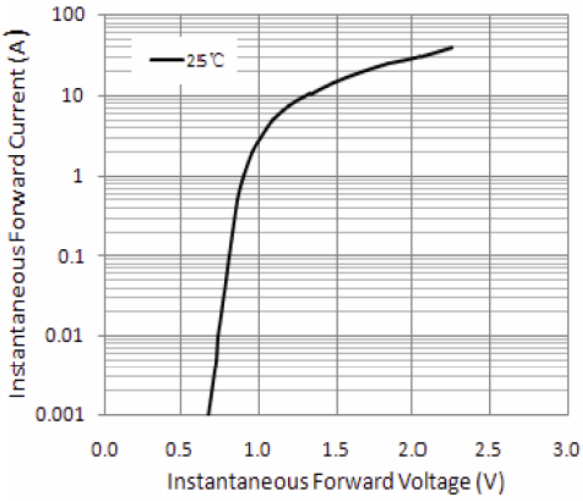

Figure 1.
Typical Instantaneous Forward Characteristics

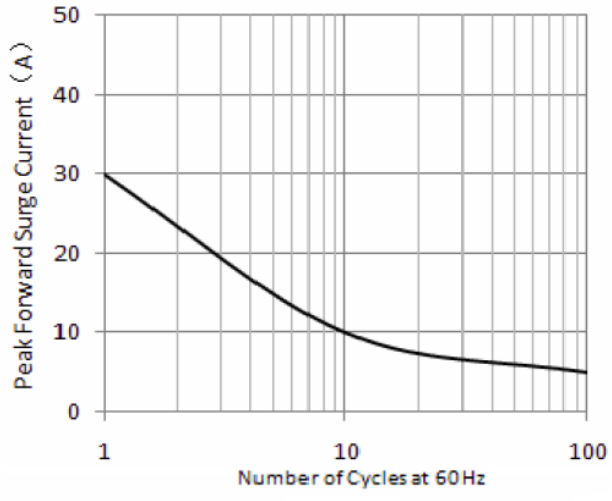

Figure 2.
Maximum Non-Repetitive Peak Forward Surge Current

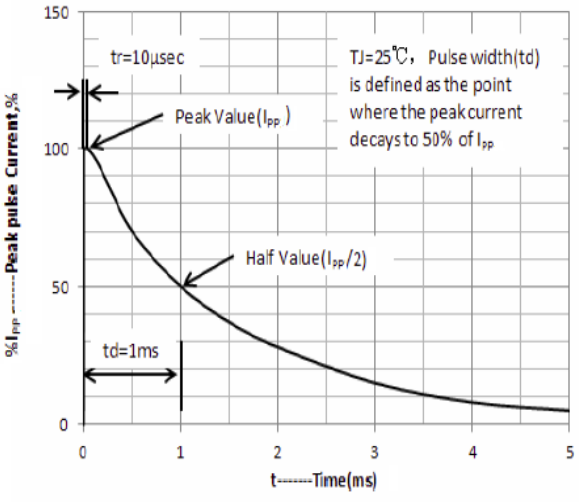

Figure 3. Pulse Waveform

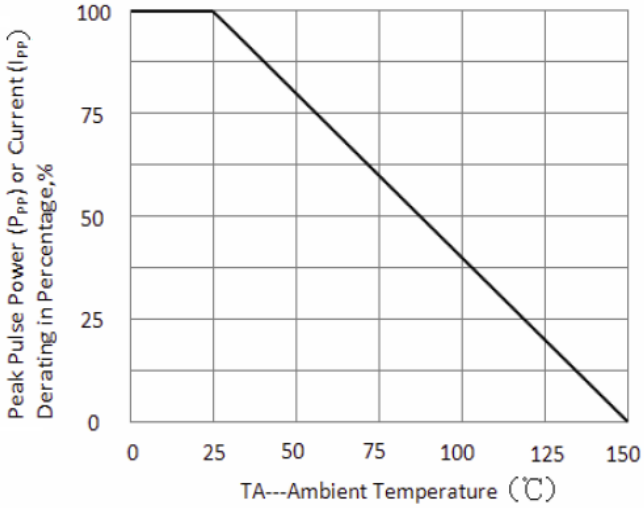

Figure 4. Peak Pulse Power Derating Curve

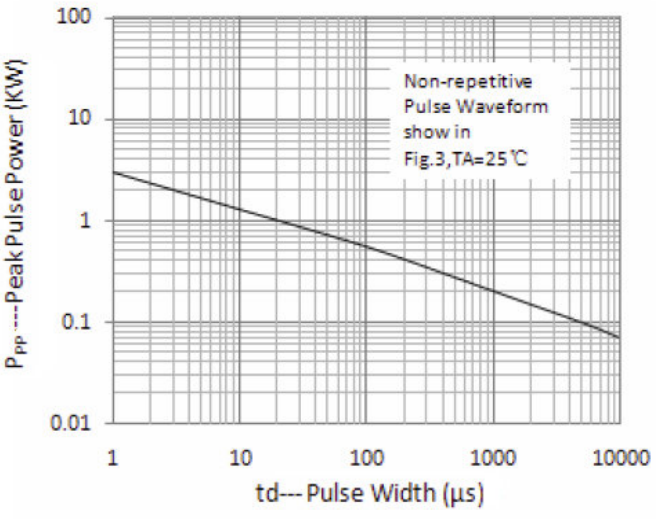

Figure 5. Peak Pulse Power Derating Curve