

RoHS Compliant Product

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

FEATURES

- For surface mounted applications in order to optimize board space.
- Glass passivated junction
- Low inductance
- Low profile package

SMBM



MECHANICAL DATA

- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: For uni-directional types the band denotes cathode end, no marking on bi-directional types

PACKAGE INFORMATION

Package	MPQ	Leader Size
SMBM	5K	13 inch

ORDER INFORMATION

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

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Maximum Ratings and Electrical characteristics Ratings at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbol	Ratings	Unit
Peak Pulse Power Dissipation ^{1 2} @10/1000s waveform	P _{PP}	600	W
Peak Pulse Current ¹ @10/1000µs waveform	I _{PP}	See next table.	A
Peak Forward Surge Current ³ @8.3ms single Half Sine-Wave for unidirectional only	I _{FSM}	100	A
IEC 61000-4-2 ESD Voltage	Air	±30	kV
	Contact	±30	
Typical Junction capacitance @V _R =4V, f=1MHz	C _J	390	pF
Typical Thermal Resistance Junction-Ambient	R _{θJA}	100	°C/W
Operating Junction and Storage Temperature Range	T _J , T _{STG}	-55~150	°C

Notes:

1. Non-repetitive current pulse, per Fig.3 and derated above T_A=25°C per Fig.2
2. Mounted on 5mm² (0.13mm thick) land areas.
3. Mounted on 8.3ms single half sine-wave or equivalent square wave, duty cycle=4 pulses per minute maximum.
4. Peak pulse power waveform is 10/1000µS.

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

Part Number		Marking Code		Reverse Stand-Off Voltage	Breakdown Voltage V _{BR} @ I _T		Test Current	Maximum Clamping Voltage V _C @ I _{PP}	Maximum Peak Pulse Current I _{PP}	Maximum Reverse Leakage I _R @ V _{RWM}
					Min	Max				
Directional				V _{RWM}	V _{BR}		I _T	V _C	I _{PP}	I _R
Uni	Bi	Uni	Bi	V	V	V	mA	V	A	µA
SMBFJ5.0A-C	SMBFJ5.0CA-C	KE	AE	5	6.4	7	10	9.2	65.3	800
SMBFJ6.0A-C	SMBFJ6.0CA-C	KG	AG	6	6.67	7.37	10	10.3	58.3	800
SMBFJ6.5A-C	SMBFJ6.5CA-C	KK	AK	6.5	7.22	7.98	10	11.2	53.6	500
SMBFJ7.0A-C	SMBFJ7.0CA-C	KM	AM	7	7.78	8.6	10	12	50	200
SMBFJ7.5A-C	SMBFJ7.5CA-C	KP	AP	7.5	8.33	9.21	1	12.9	46.6	100
SMBFJ8.0A-C	SMBFJ8.0CA-C	KR	AR	8	8.89	9.83	1	13.6	44.2	50
SMBFJ8.5A-C	SMBFJ8.5CA-C	KT	AT	8.5	9.44	10.4	1	14.4	41.7	20
SMBFJ9.0A-C	SMBFJ9.0CA-C	KV	AV	9	10	11.1	1	15.4	39	10
SMBFJ10A-C	SMBFJ10CA-C	KX	AX	10	11.1	12.3	1	17	35.3	5
SMBFJ11A-C	SMBFJ11CA-C	KZ	AZ	11	12.2	13.5	1	18.2	33	1
SMBFJ12A-C	SMBFJ12CA-C	LE	BE	12	13.3	14.7	1	19.9	30	1
SMBFJ13A-C	SMBFJ13CA-C	LG	BG	13	14.4	15.9	1	21.5	28	1
SMBFJ14A-C	SMBFJ14CA-C	LK	BK	14	15.6	17.2	1	23.2	25.9	1
SMBFJ15A-C	SMBFJ15CA-C	LM	BM	15	16.7	18.5	1	24.4	24.6	1
SMBFJ16A-C	SMBFJ16CA-C	LP	BP	16	17.8	19.7	1	26	23.1	1
SMBFJ17A-C	SMBFJ17CA-C	LR	BR	17	18.9	20.9	1	27.6	21.8	1
SMBFJ18A-C	SMBFJ18CA-C	LT	BT	18	20	22.1	1	29.2	20.6	1
SMBFJ20A-C	SMBFJ20CA-C	LV	BV	20	22.2	24.5	1	32.4	18.6	1
SMBFJ22A-C	SMBFJ22CA-C	LX	BX	22	24.4	26.9	1	35.5	16.9	1
SMBFJ24A-C	SMBFJ24CA-C	LZ	BZ	24	26.7	29.5	1	38.9	15.5	1
SMBFJ26A-C	SMBFJ26CA-C	ME	CE	26	28.9	31.9	1	42.1	14.3	1
SMBFJ28A-C	SMBFJ28CA-C	MG	CG	28	31.1	34.4	1	45.4	13.3	1
SMBFJ30A-C	SMBFJ30CA-C	MK	CK	30	33.3	36.8	1	48.4	12.4	1
SMBFJ33A-C	SMBFJ33CA-C	MM	CM	33	36.7	40.6	1	53.3	11.3	1
SMBFJ36A-C	SMBFJ36CA-C	MP	CP	36	40	44.2	1	58.1	10.4	1
SMBFJ40A-C	SMBFJ40CA-C	MR	CR	40	44.4	49.1	1	64.5	9.3	1
SMBFJ43A-C	SMBFJ43CA-C	MT	CT	43	47.8	52.8	1	69.4	8.7	1
SMBFJ45A-C	SMBFJ45CA-C	MV	CV	45	50	55.3	1	72.7	8.3	1
SMBFJ48A-C	SMBFJ48CA-C	MX	CX	48	53.3	58.9	1	77.4	7.8	1
SMBFJ51A-C	SMBFJ51CA-C	MZ	CZ	51	56.7	62.7	1	82.4	7.3	1
SMBFJ54A-C	SMBFJ54CA-C	NE	DE	54	60	66.3	1	87.1	6.9	1

ELECTRICAL CHARACTERISTICS (Rating $T_A=25^{\circ}\text{C}$ unless otherwise specified)

Part Number		Marking Code		Reverse Stand-Off Voltage	Breakdown Voltage V_{BR} @ I_T		Test Current	Maximum Clamping Voltage V_C @ I_{PP}	Maximum Peak Pulse Current	Maximum Reverse Leakage I_R @ V_{RWM}
					Min	Max				
Directional				V_{RWM}	V_{BR}		I_T	V_C	I_{PP}	I_R
Uni	Bi	Uni	Bi	V	V	V	mA	V	A	μA
SMBFJ58A-C	SMBFJ58CA-C	NG	DG	58	64.4	71.2	1	93.6	6.5	1
SMBFJ60A-C	SMBFJ60CA-C	NK	DK	60	66.7	73.7	1	96.8	6.2	1
SMBFJ64A-C	SMBFJ64CA-C	NM	DM	64	71.1	78.6	1	103	5.9	1
SMBFJ70A-C	SMBFJ70CA-C	NP	DP	70	77.8	86	1	113	5.3	1
SMBFJ75A-C	SMBFJ75CA-C	NR	DR	75	83.3	92.1	1	121	5	1
SMBFJ78A-C	SMBFJ78CA-C	NT	DT	78	86.7	95.8	1	126	4.8	1
SMBFJ85A-C	SMBFJ85CA-C	NV	DV	85	94.4	104	1	137	4.4	1
SMBFJ90A-C	SMBFJ90CA-C	NX	DX	90	100	111	1	146	4.1	1
SMBFJ100A-C	SMBFJ100CA-C	NZ	DZ	100	111	123	1	162	3.7	1
SMBFJ110A-C	SMBFJ110CA-C	PE	EE	110	122	135	1	177	3.4	1
SMBFJ120A-C	SMBFJ120CA-C	PG	EG	120	133	147	1	193	3.1	1
SMBFJ130A-C	SMBFJ130CA-C	PK	EK	130	144	159	1	209	2.9	1
SMBFJ150A-C	SMBFJ150CA-C	PM	EM	150	167	185	1	243	2.5	1
SMBFJ160A-C	SMBFJ160CA-C	PP	EP	160	178	197	1	259	2.3	1
SMBFJ170A-C	SMBFJ170CA-C	PR	ER	170	189	209	1	275	2.2	1
SMBFJ180A-C	SMBFJ180CA-C	PT	ET	180	201	222	1	292	2.1	1
SMBFJ188A-C	SMBFJ188CA-C	PB	EB	188	209	231	1	304	2	1
SMBFJ200A-C	SMBFJ200CA-C	PV	EV	200	224	247	1	324	1.9	1
SMBFJ220A-C	SMBFJ220CA-C	PX	EX	220	246	272	1	356	1.7	1
SMBFJ250A-C	SMBFJ250CA-C	PZ	EZ	250	279	309	1	405	1.5	1
SMBFJ300A-C	SMBFJ300CA-C	QE	FE	300	335	371	1	486	1.3	1
SMBFJ350A-C	SMBFJ350CA-C	QG	FG	350	391	432	1	567	1.1	1
SMBFJ400A-C	SMBFJ400CA-C	QK	FK	400	447	494	1	648	0.9	1
SMBFJ440A-C	SMBFJ440CA-C	QM	FM	440	492	543	1	713	0.9	1

CHARACTERISTICS CURVE

Fig.1 Peak Pulse Power Rating Curve

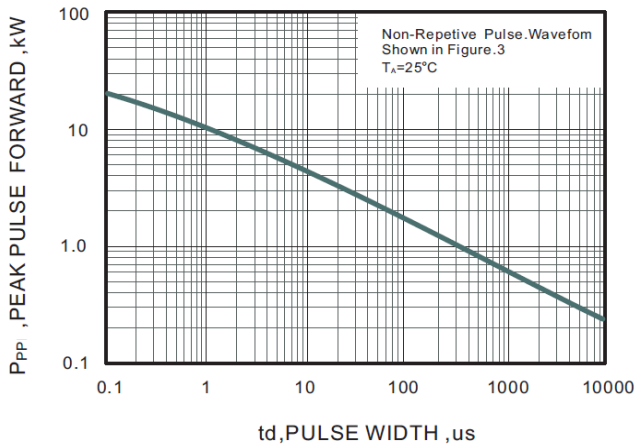


Fig.2 Forward Current Derating Curve

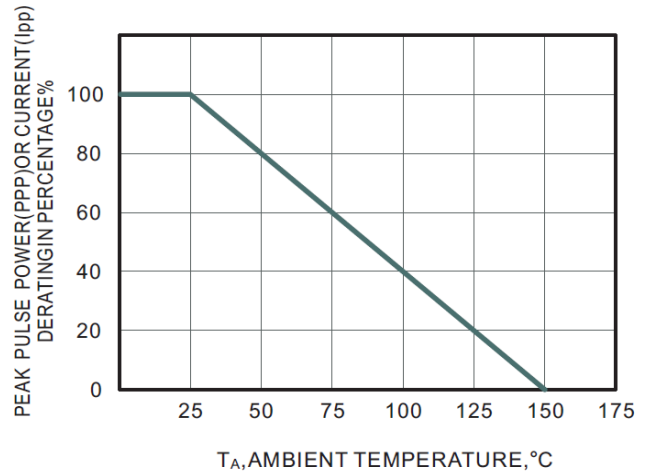


Fig.3 Pulse Waveform

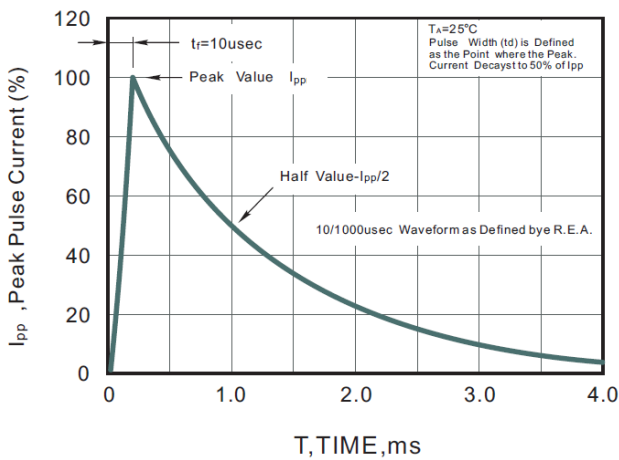
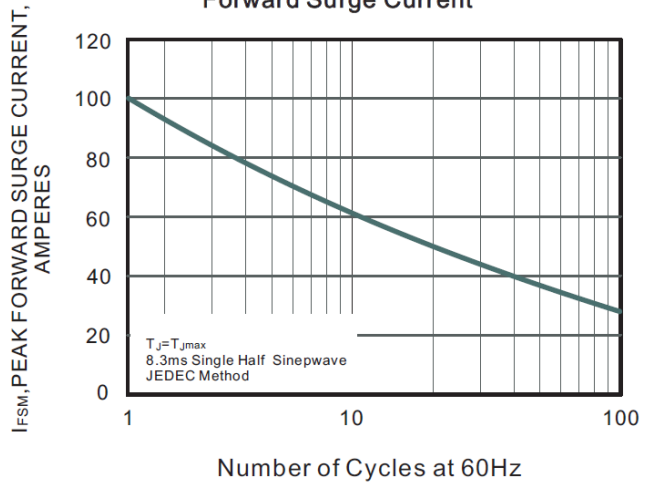
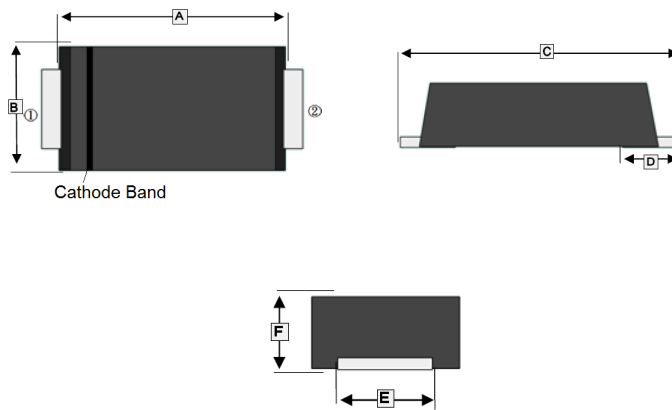


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



PACKAGE OUTLINE DIMENSIONS

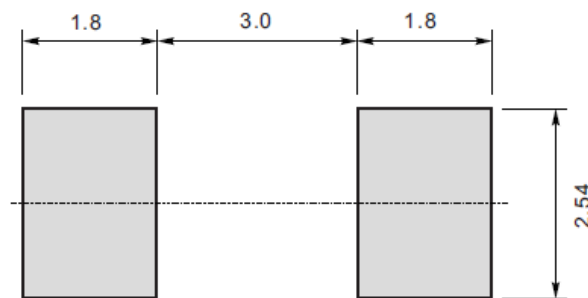
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REF.	Millimeter	
	Min.	Max.
A	4.20	4.70
B	3.40	3.80
C	5.10	5.50
D	1.00 REF.	
E	1.80	2.20
F	1.10	1.45
G	0.15	0.26

MOUNTING PAD LAYOUT

SMBM



*Dimensions in millimeters