

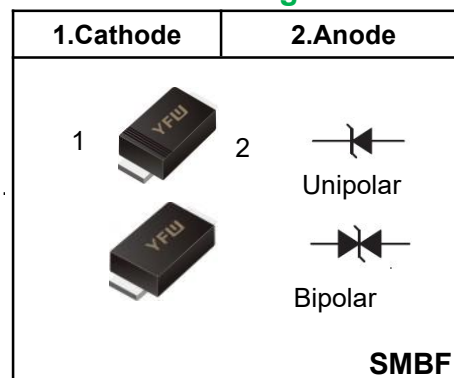
Surface mount transient voltage suppressor power 600 watts

Stand-Off Voltage: 5.0V~440V

FEATURES

- ◆For surface mounted applications in order to optimize board space.
- ◆Low profile package.
- ◆Glass passivated junction.
- ◆Low inductance.
- ◆Plastic package has Underwriters Laboratory Flammability.

Pinning



MECHANICAL DATA

- ◆Case: SMBF
- ◆Terminals: Solderable per MIL-STD-750, Method 2026
- ◆Approx. Weight: 57mg /0.002oz

Maximum Ratings and Electrical characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter		Symbol	Value	Unit
Peak Pulse Power Dissipation on 10/1000 s waveform (Note1,Note2, Fig.1).		P_{PPM}	600	W
Peak Forward Surge Current,8.3ms Single Half Sine-Wave Superimposed on Rated Load, (JEDEC Method) (Note 3, Fig4).		I_{FSM} (UNI)	100	A
Peak Pulse Current on 10/1000 us waveform (Note 1, Fig 3)		I_{PPM}	see Table 1	A
ESD Voltage per IEC6100-4-2	Contact	V_{ESD1}	±30	kV
	Air	V_{ESD2}	±30	
Typical Junction Capacitance at VR=4V, f=1MHz		C_j	390	pF
Typical Thermal Resistance Junction to Ambient(Note 2)		R_{θJA}	100	°C/W
Operating Junction Temperature and Storage Temperature Range		T_J,T_{STG}	-55 to +150	°C

NOTES:

- 1.Non-repetitive current pulse, per Fig.3 and derated above T_A = 25°C per Fig. 2.
- 2.Mounted on 5 mm² (0.13mm thick) land areas.
- 3.Measured 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.

Characteristics at Ta = 25°C

Type		Reverse Stand-off Voltage	Breakdown Voltage V_{BR} @ I_T		Test Current I_T	Maximum Reverse Leakage	Max. Clamp Voltage V_C @ I_{pp}	Peak Pulse Current I_{pp}	Package	
			Min	Max					SMBF Device Marking Ccode	
UNI	BI	V	V	V	mA	μA	V	A	UNI	BI
600W Transient Voltage Suppresso										
SMBFJ5.0A	SMBFJ5.0CA	5	6.4	7	10	800	9.2	65.3	KE	AE
SMBFJ6.0A	SMBFJ6.0CA	6	6.67	7.37	10	800	10.3	58.3	KG	AG
SMBFJ6.5A	SMBFJ6.5CA	6.5	7.22	7.98	10	500	11.2	53.6	KK	AK
SMBFJ7.0A	SMBFJ7.0CA	7	7.78	8.6	10	200	12	50	KM	AM
SMBFJ7.5A	SMBFJ7.5CA	7.5	8.33	9.21	1	100	12.9	46.6	KP	AP
SMBFJ8.0A	SMBFJ8.0CA	8	8.89	9.83	1	50	13.6	44.2	KR	AR
SMBFJ8.5A	SMBFJ8.5CA	8.5	9.44	10.4	1	20	14.4	41.7	KT	AT
SMBFJ9.0A	SMBFJ9.0CA	9	10	11.1	1	10	15.4	39	KV	AV
SMBFJ10A	SMBFJ10CA	10	11.1	12.3	1	5	17	35.3	KX	AX
SMBFJ11A	SMBFJ11CA	11	12.2	13.5	1	1	18.2	33	KZ	AZ
SMBFJ12A	SMBFJ12CA	12	13.3	14.7	1	1	19.9	30	LE	BE
SMBFJ13A	SMBFJ13CA	13	14.4	15.9	1	1	21.5	28	LG	BG
SMBFJ14A	SMBFJ14CA	14	15.6	17.2	1	1	23.2	25.9	LK	BK
SMBFJ15A	SMBFJ15CA	15	16.7	18.5	1	1	24.4	24.6	LM	BM
SMBFJ16A	SMBFJ16CA	16	17.8	19.7	1	1	26	23.1	LP	BP
SMBFJ17A	SMBFJ17CA	17	18.9	20.9	1	1	27.6	21.8	LR	BR
SMBFJ18A	SMBFJ18CA	18	20	22.1	1	1	29.2	20.6	LT	BT
SMBFJ20A	SMBFJ20CA	20	22.2	24.5	1	1	32.4	18.6	LV	BV
SMBFJ22A	SMBFJ22CA	22	24.4	26.9	1	1	35.5	16.9	LX	BX
SMBFJ24A	SMBFJ24CA	24	26.7	29.5	1	1	38.9	15.5	LZ	BZ
SMBFJ26A	SMBFJ26CA	26	28.9	31.9	1	1	42.1	14.3	ME	CE
SMBFJ28A	SMBFJ28CA	28	31.1	34.4	1	1	45.4	13.3	MG	CG
SMBFJ30A	SMBFJ30CA	30	33.3	36.8	1	1	48.4	12.4	MK	CK
SMBFJ33A	SMBFJ33CA	33	36.7	40.6	1	1	53.3	11.3	MM	CM
SMBFJ36A	SMBFJ36CA	36	40	44.2	1	1	58.1	10.4	MP	CP
SMBFJ40A	SMBFJ40CA	40	44.4	49.1	1	1	64.5	9.3	MR	CR
SMBFJ43A	SMBFJ43CA	43	47.8	52.8	1	1	69.4	8.7	MT	CT
SMBFJ45A	SMBFJ45CA	45	50	55.3	1	1	72.7	8.3	MV	CV
SMBFJ48A	SMBFJ48CA	48	53.3	58.9	1	1	77.4	7.8	MX	CX
SMBFJ51A	SMBFJ51CA	51	56.7	62.7	1	1	82.4	7.3	MZ	CZ
SMBFJ54A	SMBFJ54CA	54	60	66.3	1	1	87.1	6.9	NE	DE
SMBFJ58A	SMBFJ58CA	58	64.4	71.2	1	1	93.6	6.5	NG	DG
SMBFJ60A	SMBFJ60CA	60	66.7	73.7	1	1	96.8	6.2	NK	DK
SMBFJ64A	SMBFJ64CA	64	71.1	78.6	1	1	103	5.9	NM	DM
SMBFJ70A	SMBFJ70CA	70	77.8	86	1	1	113	5.3	NP	DP
SMBFJ75A	SMBFJ75CA	75	83.3	92.1	1	1	121	5	NR	DR
SMBFJ78A	SMBFJ78CA	78	86.7	95.8	1	1	126	4.8	NT	DT
SMBFJ85A	SMBFJ85CA	85	94.4	104	1	1	137	4.4	NV	DV
SMBFJ90A	SMBFJ90CA	90	100	111	1	1	146	4.1	NX	DX
SMBFJ100A	SMBFJ100CA	100	111	123	1	1	162	3.7	NZ	DZ
SMBFJ110A	SMBFJ110CA	110	122	135	1	1	177	3.4	PE	EE
SMBFJ120A	SMBFJ120CA	120	133	147	1	1	193	3.1	PG	EG
SMBFJ130A	SMBFJ130CA	130	144	159	1	1	209	2.9	PK	EK
SMBFJ150A	SMBFJ150CA	150	167	185	1	1	243	2.5	PM	EM
SMBFJ160A	SMBFJ160CA	160	178	197	1	1	259	2.3	PP	EP
SMBFJ170A	SMBFJ170CA	170	189	209	1	1	275	2.2	PR	ER
SMBFJ180A	SMBFJ180CA	180	201	222	1	1	292	2.1	PT	ET
SMBFJ188A	SMBFJ188CA	188	209	231	1	1	304	2	PB	EB
SMBFJ200A	SMBFJ200CA	200	224	247	1	1	324	1.9	PV	EV
SMBFJ220A	SMBFJ220CA	220	246	272	1	1	356	1.7	PX	EX
SMBFJ250A	SMBFJ250CA	250	279	309	1	1	405	1.5	PZ	EZ
SMBFJ300A	SMBFJ300CA	300	335	371	1	1	486	1.3	QE	FE
SMBFJ350A	SMBFJ350CA	350	391	432	1	1	567	1.1	QG	FG
SMBFJ400A	SMBFJ400CA	400	447	494	1	1	648	0.9	QK	FK
SMBFJ440A	SMBFJ440CA	440	492	543	1	1	713	0.9	QM	FM

Fig.1 Peak Pulse Power Rating Curve

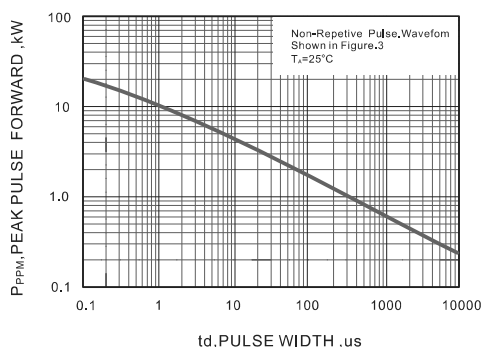


Fig.2 Forward Current Derating Curve

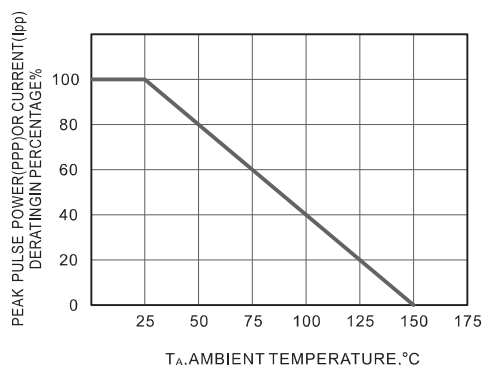


Fig.3 Pulse Waveform

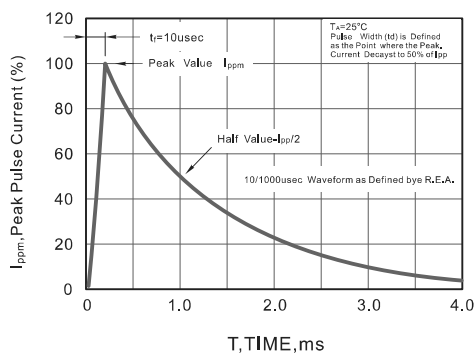
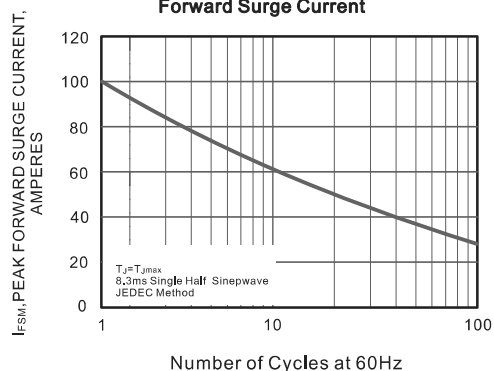
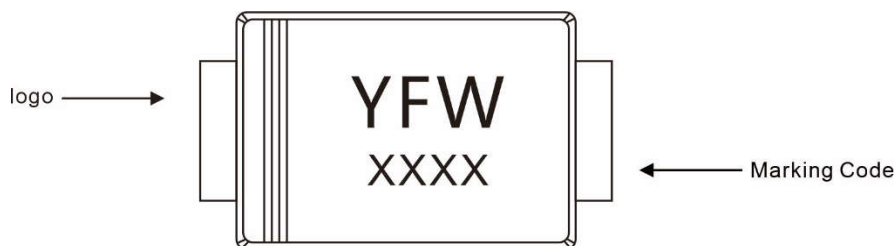


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



Marking Diagram



Ordering information

Package	Packing Description	Packing Quantity
SMBF	Tape/Reel, 13" reel	5000PCS/Reel 50000PCS/Carton

Package Dimensions

SMBF

Side view of the component showing dimensions C, H_E, and A. The top edge is labeled "ALL ROUND". A surface texture symbol is shown at the bottom right.

Side view of the component showing dimensions E and A. The top edge is labeled "ALL ROUND".

Top view of the component showing dimensions D, E, and A.

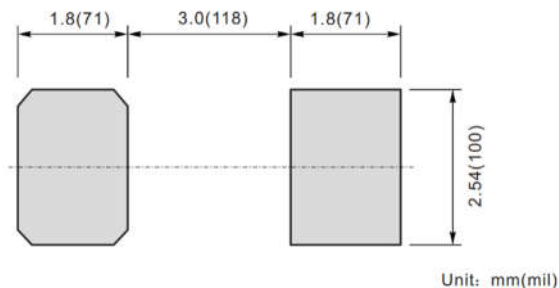
Top View

Bottom view of the component showing dimensions g, e, and "pad".

Bottom View

Dim.	Millimeter(mm)		mil	
	Min.	Max.	Min.	Max.
A	1.1	1.3	43	51
C	0.18	0.26	7	10
D	4.2	4.4	165	173
E	3.5	3.7	138	146
H _E	5.1	5.5	200	216
e	2.2	1.9	75	86
g	1.0		40	
∠	9°			

The recommended mounting pad size



Disclaimer

The information presented in this document is for reference only. GuangDong Youfeng Microelectronics Co.,Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise. The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), YFW or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale. This publication supersedes & replaces all information previously supplied. For additional information, please visit our website <https://www.yfwdiode.com>, or consult YFW sales office for further assistance.