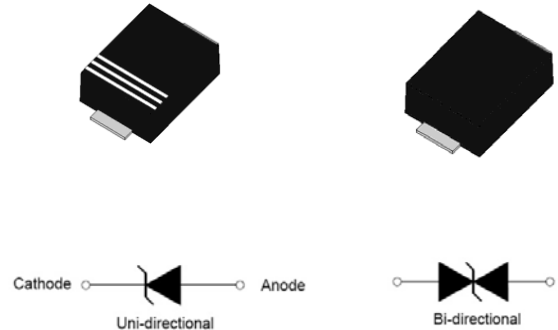


PRIMARY CHARACTERISTICS	
P_{PP}	1500W
V_{RWM}	5V~200V
I_{PP}	163A~4.7A
V_C	9.2V~324V
$T_{J,Max}$	150°C

FEATURES

- Low profile package
- Low inductance
- Excellent clamping capability
- 1500W peak pulse power capability at 10/1000 μ s waveform.
- Typical IR less than 1 μ A above 14V
- High temperature to reflow soldering: 260°C/40s at terminals
- Very fast response time
- Moisture Sensitivity Level 1

SMBF PACKAGE



MECHANICAL DATA

- Case : Molded plastic, SMBF
- Polarity : Shown above
- Terminals : Plated terminals, solderable per MIL-STD-750, Method 2026
- Epoxy : UL94-V0 rated flame retardant

ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$, RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Value	Unit
Storage and operating junction temperature range	T_{STG}/ T_J	-55 to +150	°C
Steady state power dissipation at $T_L=75^\circ\text{C}$	$P_{M(AV)}$	5.0	W
Peak pulse power dissipation on 10/1000 μ s waveform	P_{PP}	1500	W
Maximum instantaneous forward voltage at 50A for unidirectional	V_F	5.0	V
Peak forward surge current, 8.3ms single half sine wave (Note 1)	I_{FSM}	200	A

Notes:

- 1 Measured on 8.3ms single half sine wave or equivalent square wave for unidirectional device only, duty cycle=4 per minute maximum

ELECTRICAL CHARACTERISTICS(TA=25 °C)

Part Number		Marking		VR	IR@VR	V _{BR} @IT		IT	VC@I _{PP}	I _{PP} ①
Uni-Polar	Bi-Polar	Uni	Bi	V	μA	min(V)	max(V)	mA	max(V)	A
SMBF15J5.0A	SMBF15J5.0CA	GDE	BDE	5.0	300	6.40	7.00	10	9.2	163.0
SMBF15J6.0A	SMBF15J6.0CA	GDG	BDG	6.0	250	6.67	7.37	10	10.3	145.6
SMBF15J6.5A	SMBF15J6.5CA	GDK	BDK	6.5	150	7.22	7.98	10	11.2	134.0
SMBF15J7.0A	SMBF15J7.0CA	GDM	BDM	7.0	100	7.78	8.60	10	12.0	125.0
SMBF15J7.5A	SMBF15J7.5CA	GDP	BDP	7.5	50	8.33	9.21	1	12.9	116.3
SMBF15J8.0A	SMBF15J8.0CA	GDR	BDR	8.0	30	8.89	9.83	1	13.6	110.3
SMBF15J8.5A	SMBF15J8.5CA	GDT	BDT	8.5	20	9.44	10.40	1	14.4	104.2
SMBF15J9.0A	SMBF15J9.0CA	GDV	BDV	9.0	10	10.00	11.10	1	15.4	97.4
SMBF15J10A	SMBF15J10CA	GDX	BDX	10	5	11.10	12.30	1	17.0	88.2
SMBF15J11A	SMBF15J11CA	GDZ	BDZ	11	2	12.20	13.50	1	18.2	82.4
SMBF15J12A	SMBF15J12CA	GEE	BEE	12	2	13.30	14.70	1	19.9	75.4
SMBF15J13A	SMBF15J13CA	GEG	BEG	13	2	14.40	15.90	1	21.5	69.8
SMBF15J14A	SMBF15J14CA	GEK	BEK	14	2	15.60	17.20	1	23.2	64.7
SMBF15J15A	SMBF15J15CA	GEM	BEM	15	1	16.70	18.50	1	24.4	61.5
SMBF15J16A	SMBF15J16CA	GEP	BEP	16	1	17.80	19.70	1	26.0	57.7
SMBF15J17A	SMBF15J17CA	GER	BER	17	1	18.90	20.90	1	27.6	54.4
SMBF15J18A	SMBF15J18CA	GET	BET	18	1	20.00	22.10	1	29.2	51.4
SMBF15J20A	SMBF15J20CA	GEV	BEV	20	1	22.20	24.50	1	32.4	46.3
SMBF15J22A	SMBF15J22CA	GEX	BEX	22	1	24.40	26.90	1	35.5	42.3
SMBF15J24A	SMBF15J24CA	GEZ	BEZ	24	1	26.70	29.50	1	38.9	38.6
SMBF15J26A	SMBF15J26CA	GFE	BFE	26	1	28.90	31.90	1	42.1	35.6
SMBF15J28A	SMBF15J28CA	GFG	BFG	28	1	31.10	34.40	1	45.4	33.1
SMBF15J30A	SMBF15J30CA	GFK	BFK	30	1	33.30	36.80	1	48.4	31.0
SMBF15J33A	SMBF15J33CA	GFM	BFM	33	1	36.70	40.60	1	53.3	28.2

ELECTRICAL CHARACTERISTICS(TA=25°C)

Part Number		Marking		VR	IR@VR	V _{BR} @IT		IT	VC@I _{PP}	I _{PP} ①
Uni-Polar	Bi-Polar	Uni	Bi	V	μA	min(V)	max(V)	mA	max(V)	A
SMBF15J36A	SMBF15J36CA	GFP	BFP	36	1	40.00	44.20	1	58.1	25.8
SMBF15J40A	SMBF15J40CA	GFR	BFR	40	1	44.40	49.10	1	64.5	23.3
SMBF15J43A	SMBF15J43CA	GFT	BFT	43	1	47.80	52.80	1	69.4	21.6
SMBF15J45A	SMBF15J45CA	GFV	BFV	45	1	50.00	55.30	1	72.7	20.6
SMBF15J48A	SMBF15J48CA	GFX	BFX	48	1	53.30	58.90	1	77.4	19.4
SMBF15J51A	SMBF15J51CA	GFZ	BFZ	51	1	56.70	62.70	1	82.4	18.2
SMBF15J54A	SMBF15J54CA	GGE	BGE	54	1	60.00	66.30	1	87.1	17.2
SMBF15J58A	SMBF15J58CA	GGG	BGG	58	1	64.40	71.20	1	93.6	16.1
SMBF15J60A	SMBF15J60CA	GGK	BGK	60	1	66.70	73.70	1	96.8	15.5
SMBF15J64A	SMBF15J64CA	GGM	BGM	64	1	71.10	78.60	1	103.0	14.6
SMBF15J70A	SMBF15J70CA	GGP	BGP	70	1	77.80	86.00	1	113.0	13.3
SMBF15J75A	SMBF15J75CA	GGR	BGR	75	1	83.30	92.10	1	121.0	12.4
SMBF15J78A	SMBF15J78CA	GGT	BGT	78	1	86.70	95.80	1	126.0	11.9
SMBF15J85A	SMBF15J85CA	GGV	BGV	85	1	94.40	104.0	1	137.0	11.0
SMBF15J90A	SMBF15J90CA	GGX	BGX	90	1	100.0	111.0	1	146.0	10.3
SMBF15J100A	SMBF15J100CA	GGZ	BGZ	100	1	111.0	123.0	1	162.0	9.3
SMBF15J110A	SMBF15J110CA	GHE	BHE	110	1	122.0	135.0	1	177.0	8.5
SMBF15J120A	SMBF15J120CA	GHG	BHG	120	1	133.0	147.0	1	193.0	7.8
SMBF15J130A	SMBF15J130CA	GHK	BHK	130	1	144.0	159.0	1	209.0	7.2
SMBF15J150A	SMBF15J150CA	GHM	BHM	150	1	167.0	185.0	1	243.0	6.2
SMBF15J160A	SMBF15J160CA	GHP	BHP	160	1	178.0	197.0	1	259.0	5.8
SMBF15J170A	SMBF15J170CA	GHR	BHR	170	1	189.0	209.0	1	275.0	5.5
SMBF15J180A	SMBF15J180CA	GHT	BHT	180	1	201.0	222.0	1	292.0	5.2
SMBF15J190A	SMBF15J190CA	GHU	BHU	190	1	211.0	234.0	1	307.0	4.9
SMBF15J200A	SMBF15J200CA	GHV	BHV	200	1	224.0	247.0	1	324.0	4.7

① Surge waveform:10/1000μs

VR: Stand-off voltage -- Maximum voltage that can be applied

 V_{BR}: Breakdown voltage

 VC: Clamping voltage -- Peak voltage measured across the suppressor at a specified I_{PP}

IR: Reverse leakage current

RATINGS AND V-I CHARACTERISTICS CURVES ($T_A=25^{\circ}\text{C}$, unless otherwise noted)

FIG.1:V- I curve characteristics (Uni-directional)

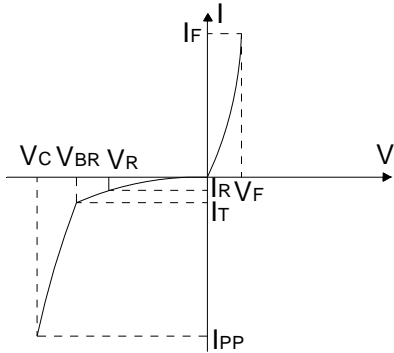


FIG.2:V- I curve characteristics (Bi-directional)

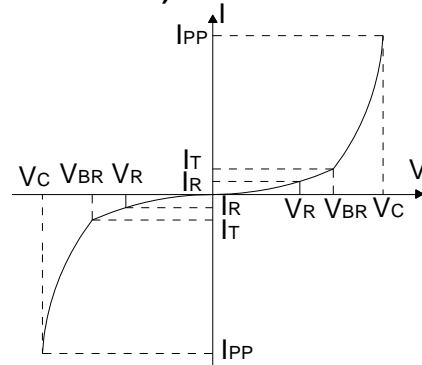


FIG.3: Pulse waveform

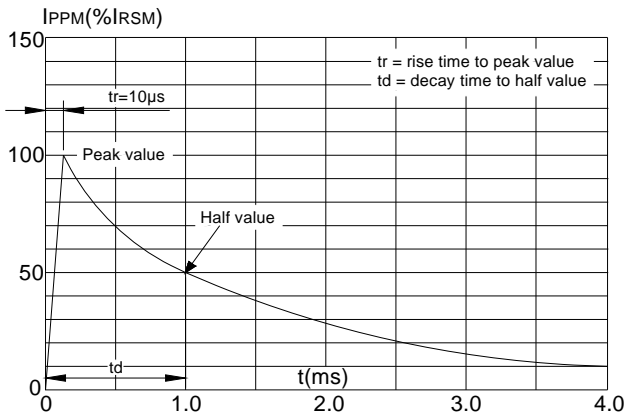
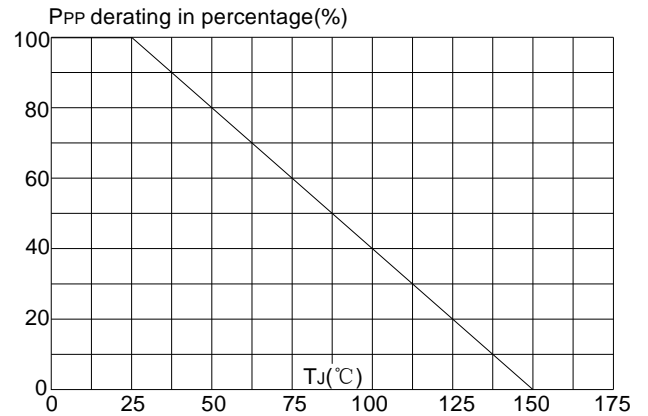
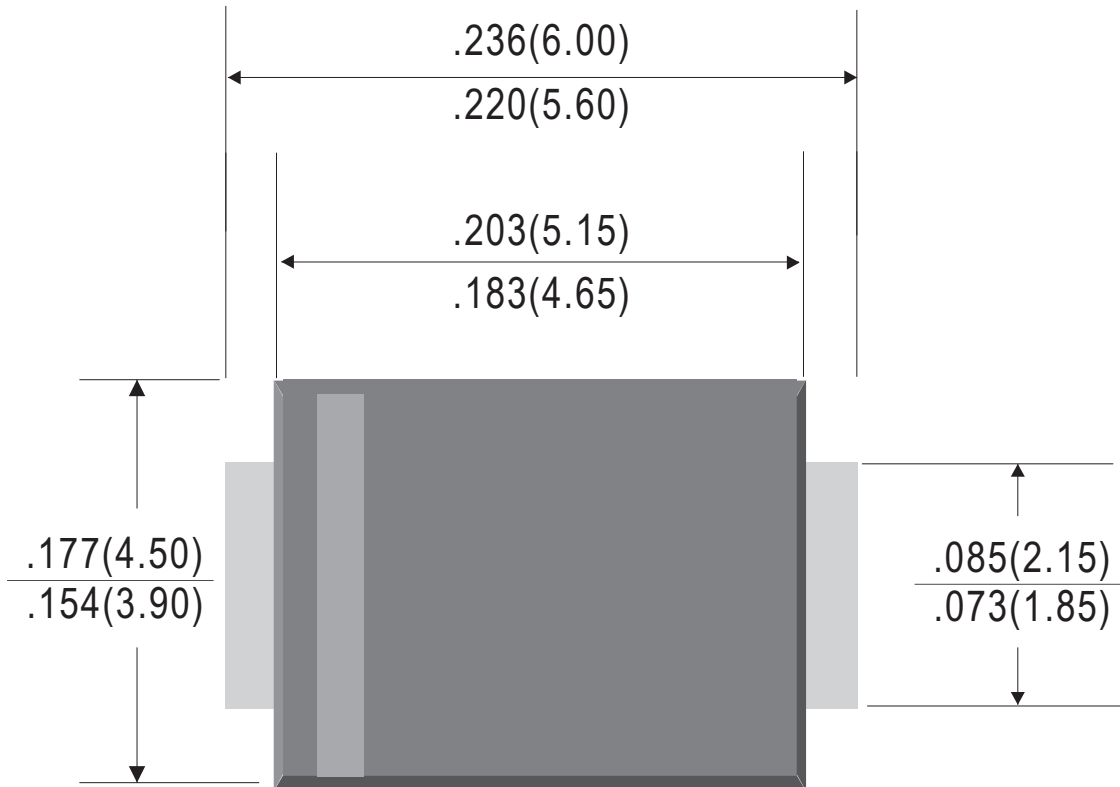


FIG.4: Pulse derating curve



Outline Drawing

SMBF



Dimensions in inches and (millimeters)

Rev.A

Ordering Information:

Device PN	Packing
Part Number -T ⁽¹⁾ = ⁽²⁾ -WS ⁽³⁾	Tape&Reel: 3 Kpcs/Reel

Note: (1) Packing code, Tape & Reel Packing

(2) Halogen free product for packing code suffix "H"

(3) WS : Willas brand abbreviation, Label Type does not display

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