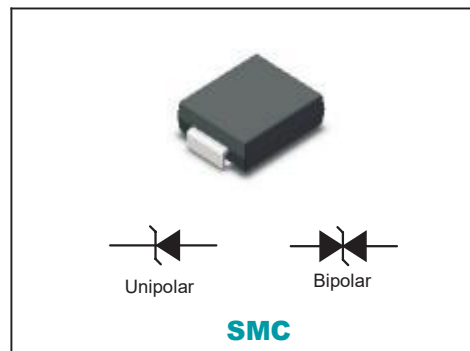


Features

- 1500 watts Peak Pulse Power (10/1000 μ s)
- Unidirectional and Bidirectional Protection
- Fast Response Time: Typically < 1ns
- Excellent Clamping Capability
- Glass Passivated Junction
- Built-in Strain relief
- Low inductance
- Low profile package
- High temperature solder:260 °C/10 seconds at terminal



Mechanical Characteristics

- JEDEC DO-214AB package
- Molding compound flammability rating: UL 94V-0
- Marking : Marking Code
- Packaging : Tape and Reel per EIA 481
- RoHS &UL497B Compliant

Applications

- I/O Interfaces
- Power lines
- Automotive and Telecommunication
- Computers & Consumer Electronics
- Industrial Electronics

Absolute Maximum Rating			
Rating	Symbol	Value	Units
Peak Pulse Power (tp =10/1000 μ s) (see Note1,2& 3)	P _{PPM}	1500	Watts
Peak pulse current (10/1000 μ s) (see Note2& 3)	I _{PPM}	See next table	A
Peak forward surge current (see Note4& 5)	I _{FSM}	200	A
Power dissipation on infinite heat sink T _A = 50 °C(Fig5)	P _D	6.5	W
Operating junction temperature range	T _J	-65 to + 150	°C
storage temperature range	T _{STG}	-65 to + 150	°C

Note1: Peak Pulse Power Rating as Pulse Width , per Fig1.

Note2: Peak Pulse Power or Current Derated above T_A =25 °C Per Fig. 2 and Non-Repetitive Current Pulse, Per Fig.3.

Note3: Mounted on 5.0x5.0mm² copper pad to each terminal.

Note4: 8.3ms Single Half Sine Wave or Equivalent Square Wave.

Note5: Maximum Forward Surge Current only for Unidirectional Device per Fig6.

ELECTRICAL CHARACTERISTICS (T_A=25°C)

Part Number		Marking		V _{RWM}	Breakdown Voltage		Test Current	Max. Reverse Leakage	Max. Clamp Voltage	Max. Peak Pulse Current
					V _{BR} @ I _T		I _T	IR@VR	V _C @ I _{PP}	I _{PP}
					Min	Max				
UNI	BI	UNI	BI	V	V	V	mA	uA	V	A
TVS5.0SMCP15	TVS5.0SMCP15-B	GDE	BDE	5	6.4	7	10	800	9.2	163
TVS6.0SMCP15	TVS6.0SMCP15-B	GDG	BDG	6	6.67	7.37	10	800	10.3	145.7
TVS6.5SMCP15	TVS6.5SMCP15-B	GDK	BDK	6.5	7.22	7.98	10	500	11.2	134
TVS7.0SMCP15	TVS7.0SMCP15-B	GDM	BDM	7	7.78	8.6	10	200	12	125
TVS7.5SMCP15	TVS7.5SMCP15-B	GDP	BDP	7.5	8.33	9.21	1	100	12.9	116.3
TVS8.0SMCP15	TVS8.0SMCP15-B	GDR	BDR	8	8.89	9.83	1	50	13.6	110.3
TVS8.5SMCP15	TVS8.5SMCP15-B	GDT	BDT	8.5	9.44	10.4	1	20	14.4	104.2
TVS9.0SMCP15	TVS9.0SMCP15-B	GDV	BDV	9	10	11.1	1	10	15.4	97.4
TVS10SMCP15	TVS10SMCP15-B	GDX	BDX	10	11.1	12.3	1	5	17	88.3
TVS11SMCP15	TVS11SMCP15-B	GDZ	BDZ	11	12.2	13.5	1	1	18.2	82.5
TVS12SMCP15	TVS12SMCP15-B	GEE	BEE	12	13.3	14.7	1	1	19.9	75.4
TVS13SMCP15	TVS13SMCP15-B	GEG	BEG	13	14.4	15.9	1	1	21.5	69.8
TVS14SMCP15	TVS14SMCP15-B	GEK	BEK	14	15.6	17.2	1	1	23.2	64.7
TVS15SMCP15	TVS15SMCP15-B	GEM	BEM	15	16.7	18.5	1	1	24.4	61.5
TVS16SMCP15	TVS16SMCP15-B	GEP	BEP	16	17.8	19.7	1	1	26	57.7
TVS17SMCP15	TVS17SMCP15-B	GER	BER	17	18.9	20.9	1	1	27.6	54.4
TVS18SMCP15	TVS18SMCP15-B	GET	BET	18	20	22.1	1	1	29.2	51.4
TVS20SMCP15	TVS20SMCP15-B	GEV	BEV	20	22.2	24.5	1	1	32.4	46.3
TVS22SMCP15	TVS22SMCP15-B	GEX	BEX	22	24.4	26.9	1	1	35.5	42.3
TVS24SMCP15	TVS24SMCP15-B	GEZ	BEZ	24	26.7	29.5	1	1	38.9	38.6
TVS26SMCP15	TVS26SMCP15-B	GFE	BFE	26	28.9	31.9	1	1	42.1	35.7
TVS28SMCP15	TVS28SMCP15-B	GFG	BFG	28	31.1	34.4	1	1	45.4	33.1
TVS30SMCP15	TVS30SMCP15-B	GFK	BFK	30	33.3	36.8	1	1	48.4	31
TVS33SMCP15	TVS33SMCP15-B	GFM	BFM	33	36.7	40.6	1	1	53.3	28.2
TVS36SMCP15	TVS36SMCP15-B	GFP	BFP	36	40	44.2	1	1	58.1	25.9
TVS40SMCP15	TVS40SMCP15-B	GFR	BFR	40	44.4	49.1	1	1	64.5	23.3
TVS43SMCP15	TVS43SMCP15-B	GFT	BFT	43	47.8	52.8	1	1	69.4	21.7
TVS45SMCP15	TVS45SMCP15-B	GFV	BFV	45	50	55.3	1	1	72.7	20.6
TVS48SMCP15	TVS48SMCP15-B	GFX	BFX	48	53.3	58.9	1	1	77.4	19.4
TVS51SMCP15	TVS51SMCP15-B	GFZ	BFZ	51	56.7	62.7	1	1	82.4	18.2
TVS54SMCP15	TVS54SMCP15-B	GGE	BGE	54	60	66.3	1	1	87.1	17.3
TVS58SMCP15	TVS58SMCP15-B	GGG	BGG	58	64.4	71.2	1	1	93.6	16.1
TVS60SMCP15	TVS60SMCP15-B	GGK	BGK	60	66.7	73.7	1	1	96.8	15.5
TVS64SMCP15	TVS64SMCP15-B	GGM	BGM	64	71.1	78.6	1	1	103	14.6
TVS70SMCP15	TVS70SMCP15-B	GGP	BGP	70	77.8	86	1	1	113	13.3
TVS75SMCP15	TVS75SMCP15-B	GGR	BGR	75	83.3	92.1	1	1	121	12.4
TVS78SMCP15	TVS78SMCP15-B	GGT	BGT	78	86.7	95.8	1	1	126	11.9
TVS85SMCP15	TVS85SMCP15-B	GGV	BGV	85	94.4	104	1	1	137	11
TVS90SMCP15	TVS90SMCP15-B	GGX	BGX	90	100	111	1	1	146	10.3
TVS100SMCP15	TVS100SMCP15-B	GGZ	BGZ	100	111	123	1	1	162	9.3
TVS110SMCP15	TVS110SMCP15-B	GHE	BHE	110	122	135	1	1	177	8.5
TVS120SMCP15	TVS120SMCP15-B	GHG	BHG	120	133	147	1	1	193	7.8
TVS130SMCP15	TVS130SMCP15-B	GHK	BHK	130	144	159	1	1	209	7.2
TVS150SMCP15	TVS150SMCP15-B	GHM	BHM	150	167	185	1	1	243	6.2
TVS160SMCP15	TVS160SMCP15-B	GHP	BHP	160	178	197	1	1	259	5.8
TVS170SMCP15	TVS170SMCP15-B	GHR	BHR	170	189	209	1	1	275	5.5
TVS180SMCP15	TVS180SMCP15-B	GHT	BHT	180	201	222	1	1	292	5.1

Electrical Characteristics (Cont.)

Type		Marking		V_{RMW}	Breakdown Voltage		Test Current	Max. Reverse Leakage	Max. Clamp Voltage	Max. Peak Pulse Current
					$V_{BR} @ I_T$		I_T	$IR@VR$	$V_c @ I_{PP}$	I_{PP}
					Min	Max				
UNI	BI	UNI	BI	V	V	V	mA	uA	V	A
TVS200SMCP15	TVS200SMCP15-B	GHV	BHV	200	224	247	1	1	324	4.6
TVS220SMCP15	TVS220SMCP15-B	GHX	BHX	220	246	272	1	1	356	4.2
TVS250SMCP15	TVS250SMCP15-B	GHZ	BHZ	250	279	309	1	1	405	3.7
TVS300SMCP15	TVS300SMCP15-B	GJE	BJE	300	335	371	1	1	486	3.1
TVS350SMCP15	TVS350SMCP15-B	GJG	BJG	350	391	432	1	1	567	2.6
TVS400SMCP15	TVS400SMCP15-B	GJK	BJK	400	447	494	1	1	648	2.3
TVS440SMCP15	TVS440SMCP15-B	GJM	BJM	440	492	543	1	1	713	2.1

Typical Characteristics

Fig.1 Peak Pulse Power Rating Curve

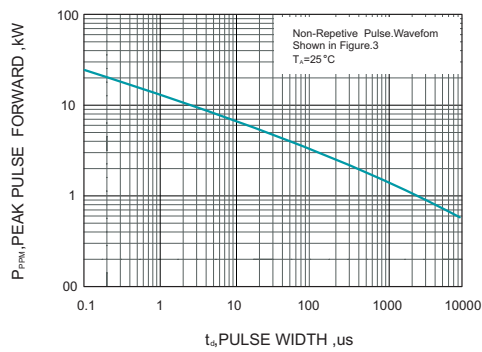


Fig.2 Forward Current Derating Curve

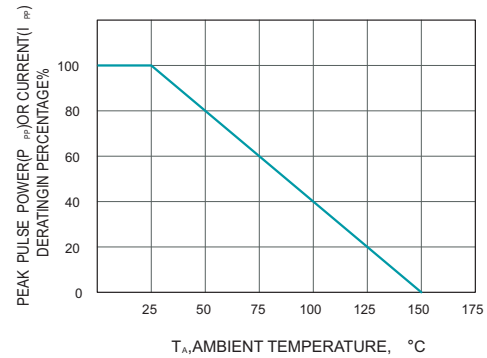


Fig.3 Pulse Waveform

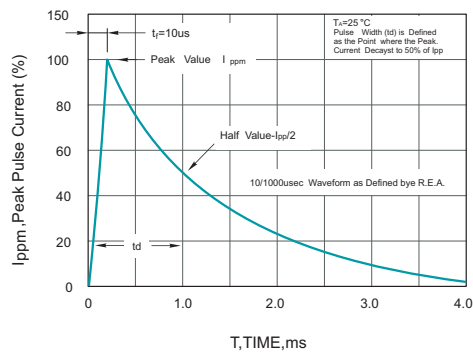
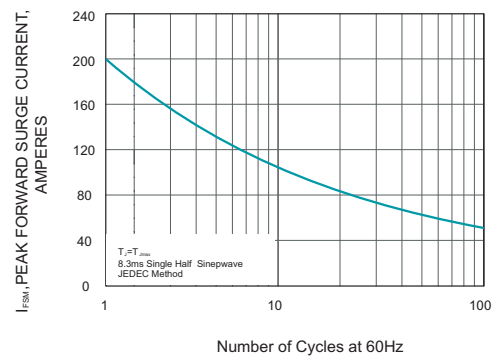


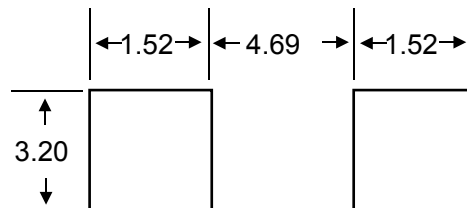
Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



Outline Drawing – SMC (DO-214AB)

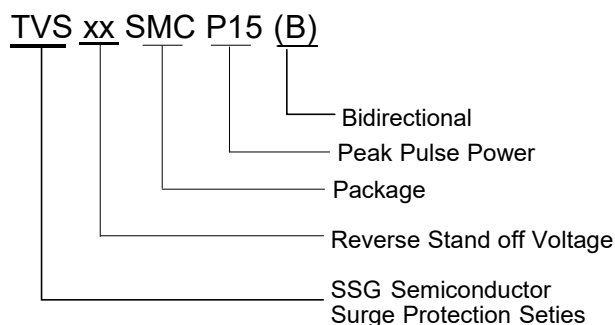
Dim	Millimeters		Inches	
	Min	Max	Min	Max
L	6.60	7.11	0.260	0.280
D	5.59	6.22	0.220	0.245
D1	2.90	3.20	0.114	0.126
T	7.75	8.13	0.305	0.320
T1	0.76	1.52	0.030	0.060
d	-	0.203	-	0.008
H1	2.06	2.62	0.079	0.103

Recommended Solder Pad Layout

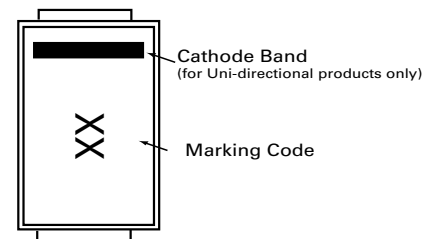


Dimensions in mm

Part Numbering System



Part Marking System



Package Information

Package Type	Description	Quantity (pcs)	Standard
DO-214AB	Tape & Reel - 16mm/13" tape	3000	EIA-481-D