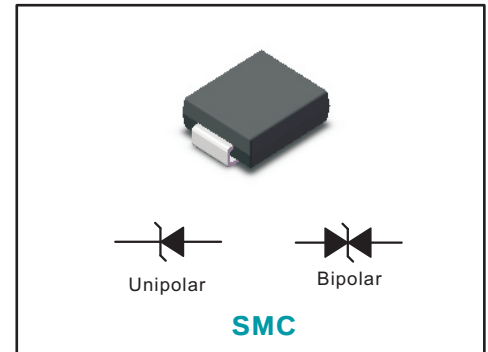


Features

- 3000 watts Peak Pulse Power (10/1000μs)
- 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
- Signal lines of sensor units for consumer
- Industrial Electronics
- Computer

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	$^{\circ}\text{C}$
Peak pulse power dissipation at 10/1000μs waveform	P_{PP}	3000	W
Steady state power dissipation at $T_L=75^{\circ}\text{C}$	$P_{\text{M(AV)}}$	6.5	W
Maximum instantaneous forward voltage at 100A for unidirectional only	V_F	5.0	V
Peak forward surge current, 8.3ms single half sine wave(Note 1)	I_{FSM}	300	A
Typical thermal resistance junction to lead	$R_{\theta\text{JL}}$	15	$^{\circ}\text{C/W}$
Typical thermal resistance junction to ambient	$R_{\theta\text{JA}}$	75	$^{\circ}\text{C/W}$

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 (T_A=25°C)

Part Number		Marking		V _{RWM}	Breakdown Voltage		Test Current	Reverse Leakage	Max. Clamp Voltage	Peak Pulse Current
					V _{BR} @ I _T		I _T	I _R @ V _{RWM}	V _C @ I _{PP}	I _{PP}
					Min	Max				
UNI	BI	UNI	BI	V	V	V	mA	μA	V	A
TVS5.0SMCP30	TVS5.0SMCP30-B	RDE	DDE	5.0	6.4	7	10	800	9.2	326.1
TVS6.0SMCP30	TVS6.0SMCP30-B	RDG	DDG	6.0	6.67	7.37	10	800	10.3	291.3
TVS6.5SMCP30	TVS6.5SMCP30-B	RDK	DDK	6.5	7.22	7.98	10	500	11.2	267.9
TVS7.0SMCP30	TVS7.0SMCP30-B	PDM	DDM	7.0	7.78	8.6	10	200	12	250
TVS7.5SMCP30	TVS7.5SMCP30-B	PDP	DDP	7.5	8.33	9.21	1	100	12.9	232.6
TVS8.0SMCP30	TVS8.0SMCP30-B	PDR	DDR	8.0	8.89	9.83	1	50	13.6	220.6
TVS8.5SMCP30	TVS8.5SMCP30-B	PDT	DDT	8.5	9.44	10.4	1	20	14.4	208.3
TVS9.0SMCP30	TVS9.0SMCP30-B	PDV	DDV	9.0	10	11.1	1	10	15.4	194.8
TVS10SMCP30	TVS10SMCP30-B	PDX	DDX	10.0	11.1	12.3	1	5	17	176.5
TVS11SMCP30	TVS11SMCP30-B	PDZ	DDZ	11.0	12.2	13.5	1	2	18.2	164.8
TVS12SMCP30	TVS12SMCP30-B	PEE	DEE	12.0	13.3	14.7	1	2	19.9	150.8
TVS13SMCP30	TVS13SMCP30-B	PEG	DEG	13.0	14.4	15.9	1	2	21.5	139.5
TVS14SMCP30	TVS14SMCP30-B	PEK	DEK	14.0	15.6	17.2	1	2	23.2	129.3
TVS15SMCP30	TVS15SMCP30-B	PEM	DEM	15.0	16.7	18.5	1	2	24.4	123
TVS16SMCP30	TVS16SMCP30-B	PEP	DEP	16.0	17.8	19.7	1	2	26	115.4
TVS17SMCP30	TVS17SMCP30-B	PER	DER	17.0	18.9	20.9	1	2	27.6	108.7
TVS18SMCP30	TVS18SMCP30-B	PET	DET	18.0	20	22.1	1	2	29.2	102.7
TVS20SMCP30	TVS20SMCP30-B	PEV	DEV	20.0	22.2	24.5	1	2	32.4	92.6
TVS22SMCP30	TVS22SMCP30-B	PEX	DEX	22.0	24.4	26.9	1	2	35.5	84.5
TVS24SMCP30	TVS24SMCP30-B	PEZ	DEZ	24.0	26.7	29.5	1	2	38.9	77.1
TVS26SMCP30	TVS26SMCP30-B	PFE	DFE	26.0	28.9	31.9	1	2	42.1	71.3
TVS28SMCP30	TVS28SMCP30-B	IFG	DFG	28.0	31.1	34.4	1	2	45.4	66.1
TVS30SMCP30	TVS30SMCP30-B	PFK	DFK	30.0	33.3	36.8	1	2	48.4	62
TVS33SMCP30	TVS33SMCP30-B	HFM	DFM	33.0	36.7	40.6	1	2	53.3	56.3
TVS36SMCP30	TVS36SMCP30-B	PFP	DFP	36.0	40	44.2	1	2	58.1	51.6
TVS40SMCP30	TVS40SMCP30-B	PFR	DFR	40.0	44.4	49.1	1	2	64.5	46.5
TVS43SMCP30	TVS43SMCP30-B	PFT	DFT	43.0	47.8	52.8	1	2	69.4	43.2
TVS45SMCP30	TVS45SMCP30-B	PFV	DFV	45.0	50	55.3	1	2	72.7	41.3
TVS48SMCP30	TVS48SMCP30-B	PFX	DFX	48.0	53.3	58.9	1	2	77.4	38.8
TVS51SMCP30	TVS51SMCP30-B	PFZ	DFZ	51.0	56.7	62.7	1	2	82.4	36.4
TVS54SMCP30	TVS54SMCP30-B	RGE	DGE	54.0	60	66.3	1	2	87.1	34.4
TVS58SMCP30	TVS58SMCP30-B	PGG	DGG	58.0	64.4	71.2	1	2	93.6	32.1
TVS60SMCP30	TVS60SMCP30-B	PGK	DGK	60.0	66.7	73.7	1	2	96.8	31
TVS64SMCP30	TVS64SMCP30-B	PGM	DGM	64.0	71.1	78.6	1	2	103	29.1
TVS70SMCP30	TVS70SMCP30-B	PGP	DGP	70.0	77.8	86	1	2	113	26.5
TVS75SMCP30	TVS75SMCP30-B	PGR	DGR	75.0	83.3	92.1	1	2	121	24.8
TVS78SMCP30	TVS78SMCP30-B	PGT	DGT	78.0	86.7	95.8	1	2	126	23.8
TVS85SMCP30	TVS85SMCP30-B	PGV	DGV	85.0	94.4	104	1	2	137	21.9
TVS90SMCP30	TVS90SMCP30-B	PGX	DGX	90.0	100	111	1	2	146	20.5
TVS100SMCP30	TVS100SMCP30-B	PGZ	DGZ	100.0	111	123	1	2	162	18.5
TVS110SMCP30	TVS110SMCP30-B	PHE	DHE	110.0	122	135	1	2	177	16.9
TVS120SMCP30	TVS120SMCP30-B	PHG	DHG	120.0	133	147	1	2	193	15.5
TVS130SMCP30	TVS130SMCP30-B	PHK	DHK	130.0	144	159	1	2	209	14.4
TVS150SMCP30	TVS150SMCP30-B	PHM	DHM	150.0	167	185	1	2	243	12.3
TVS160SMCP30	TVS160SMCP30-B	PHP	DHP	160.0	178	197	1	2	259	11.6
TVS170SMCP30	TVS170SMCP30-B	PHR	DHR	170.0	189	209	1	2	275	10.9
TVS180SMCP30	TVS180SMCP30-B	PHT	DHT	180.0	201	222	1	2	292.0	10.3
TVS190SMCP30	TVS190SMCP30-B	PHV	DHV	190.0	211	232	1	2	307.0	9.7
TVS200SMCP30	TVS200SMCP30-B	PHX	DHX	200.0	224	247	1	2	324.0	9.3
TVS220SMCP30	TVS220SMCP30-B	PHZ	DHZ	220.0	246	272	1	2	356.0	8.43

Typical Characteristics

Fig.1 Peak Pulse Power Rating Curve

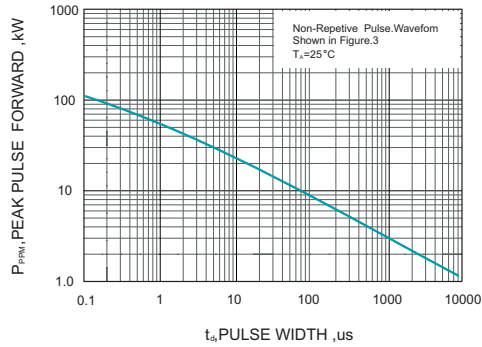


Fig.2 Forward Current Derating Curve

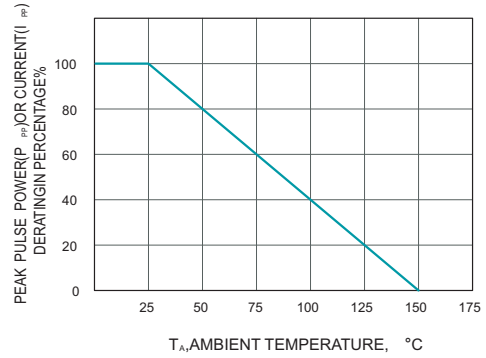


Fig.3 Pulse Waveform

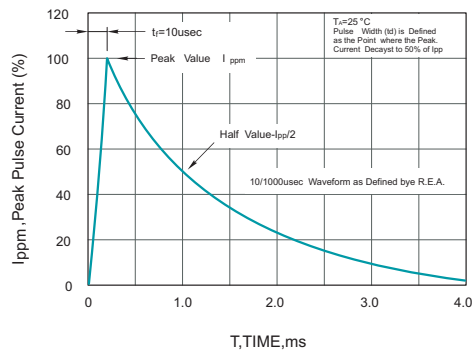
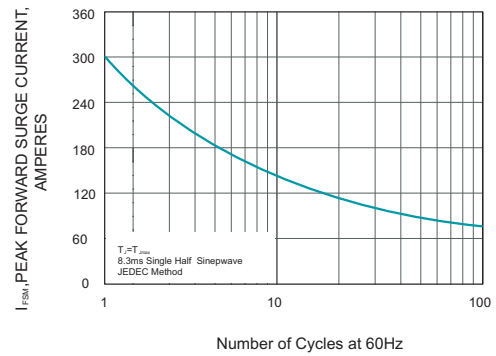


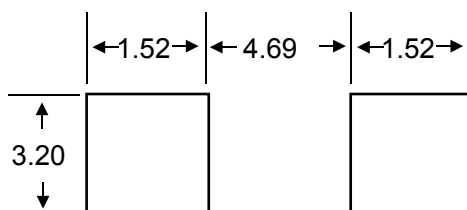
Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



Outline Drawing – SMC (DO-214AB)

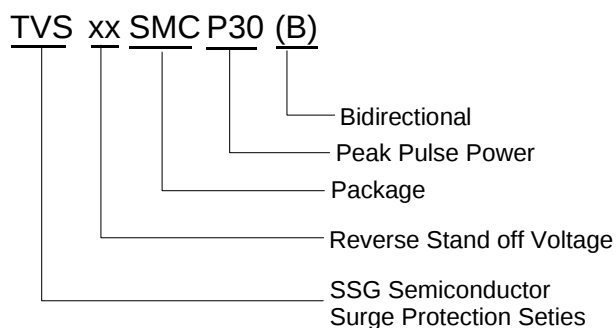
Dim	Millimeters		Inches	
	Min	Max	Min	Max
L	6.60	7.11	0.260	0.280
D	5.59	6.22	0.220	0.245
D1	2.90	3.20	0.114	0.126
T	7.75	8.13	0.305	0.320
T1	0.76	1.52	0.030	0.060
d	-	0.203	-	0.008
H1	2.06	2.62	0.079	0.103

Recommended Solder Pad Layout

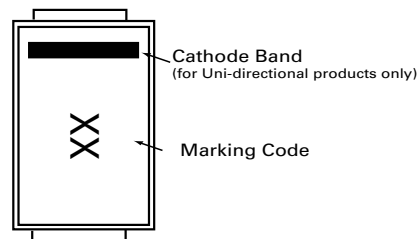


Dimensions in mm

Part Numbering System



Part Marking System



Package Information

Package Type	Description	Quantity (pcs)	Standard
DO-214AB	Tape & Reel -12mm/13" tape	3000	EIA-481-D