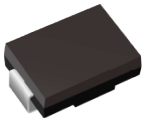
P6SMBJ8.5AS ~ P6SMBJ220CAS Series

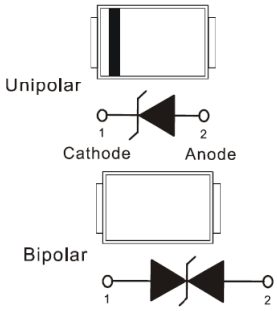
Transient Voltage Suppressor

Recongnized File # E210467 (P6SMBJ8.5AS ~ P6SMBJ170CAS Series)

Voltage	8.5~220 V	Power	600 W

SMB





Features

- Fast response time
- Low incremental surge resistance
- Ultra thin profile package for space constrained utilization.
- High temperature soldering : 260°C/10 seconds at terminals
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

Mechanical Data

- Case: Molded plastic, SMB
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0032 ounces, 0.092 grams

Maximum Ratings and Thermal Characteristics (T_A = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Peak Pulse Power Dissipation(tp = 10 / 1000 us)	P_{PP} (1) (2)	600	W
Peak Pulse Current on tp = 10 / 1000 us waveform(Fig.2)	I_{PPM} (1)	See table 1	A
Power Dissipation on Infinite Heat Sink at T_L = 50 °C	P_D	5	W
ESD IEC61000-4-2(Air) ESD IEC61000-4-2(Contact)	V_{ESD}	±15 ±8	kV
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$ (3)	150	°C/W
Operating Junction Temperature Range	T_J	-55~150	°C
Storage Temperature Range	T_{STG}	-55~150	°C

P6SMBJ8.5AS ~ P6SMBJ220CAS Series

Electrical Characteristics (T_A = 25 °C unless otherwise noted)

Part Number		V_{RWM}	V_{BR}			I_R @V_{RWM}		V_C@I_{PP}		Marking Code	
			Min.	Max.	I_T	uA					
UNI	BI	V	V	V	mA	UNI	BI	V	A	UNI	BI
600W Transient Voltage Suppressor											
P6SMBJ8.5AS	P6SMBJ8.5CAS	8.5	9.44	10.4	1	10	20	14.4	41.7	B8V5AS	8V5CAS
P6SMBJ9.0AS	P6SMBJ9.0CAS	9	10	11.1	1	5	5	15.4	39	B9V0AS	B9VCAS
P6SMBJ10AS	P6SMBJ10CAS	10	11.1	12.3	1	5	5	17	35.3	B10AS	B10CAS
P6SMBJ11AS	P6SMBJ11CAS	11	12.2	13.5	1	5	5	18.2	33	B11AS	B11CAS
P6SMBJ12AS	P6SMBJ12CAS	12	13.3	14.7	1	1	1	19.9	30.2	B12AS	B12CAS
P6SMBJ13AS	P6SMBJ13CAS	13	14.4	15.9	1	1	1	21.5	28	B13AS	B13CAS
P6SMBJ14AS	P6SMBJ14CAS	14	15.6	17.2	1	1	1	23.2	25.8	B14AS	B14CAS
P6SMBJ15AS	P6SMBJ15CAS	15	16.7	18.5	1	1	1	24.4	24.6	B15AS	B15CAS
P6SMBJ16AS	P6SMBJ16CAS	16	17.8	19.7	1	1	1	26	23.1	B16AS	B16CAS
P6SMBJ17AS	P6SMBJ17CAS	17	18.9	20.9	1	1	1	27.6	21.8	B17AS	B17CAS
P6SMBJ18AS	P6SMBJ18CAS	18	20	22.1	1	1	1	29.2	20.6	B18AS	B18CAS
P6SMBJ20AS	P6SMBJ20CAS	20	22.2	24.5	1	1	1	32.4	18.6	B20AS	B20CAS
P6SMBJ22AS	P6SMBJ22CAS	22	24.4	26.9	1	1	1	35.5	16.9	B22AS	B22CAS
P6SMBJ24AS	P6SMBJ24CAS	24	26.7	29.5	1	1	1	38.9	15.5	B24AS	B24CAS
P6SMBJ26AS	P6SMBJ26CAS	26	28.9	31.9	1	1	1	42.1	14.3	B26AS	B26CAS
P6SMBJ28AS	P6SMBJ28CAS	28	31.1	34.4	1	1	1	45.4	13.3	B28AS	B28CAS
P6SMBJ30AS	P6SMBJ30CAS	30	33.3	36.8	1	1	1	48.4	12.4	B30AS	B30CAS
P6SMBJ33AS	P6SMBJ33CAS	33	36.7	40.6	1	1	1	53.3	11.3	B33AS	B33CAS
P6SMBJ36AS	P6SMBJ36CAS	36	40	44.2	1	1	1	58.1	10.4	B36AS	B36CAS
P6SMBJ40AS	P6SMBJ40CAS	40	44.4	49.1	1	1	1	64.5	9.3	B40AS	B40CAS
P6SMBJ43AS	P6SMBJ43CAS	43	47.8	52.8	1	1	1	69.4	8.7	B43AS	B43CAS
P6SMBJ45AS	P6SMBJ45CAS	45	50	55.3	1	1	1	72.7	8.7	B45AS	B45CAS
P6SMBJ48AS	P6SMBJ48CAS	48	53.3	58.9	1	1	1	77.4	8.3	B48AS	B48CAS
P6SMBJ51AS	P6SMBJ51CAS	51	56.7	62.7	1	1	1	82.4	7.3	B51AS	B51CAS
P6SMBJ54AS	P6SMBJ54CAS	54	60	66.3	1	1	1	87.1	6.9	B54AS	B54CAS
P6SMBJ58AS	P6SMBJ58CAS	58	64.4	71.2	1	1	1	93.6	6.5	B58AS	B58CAS
P6SMBJ60AS	P6SMBJ60CAS	60	66.7	73.7	1	1	1	96.8	6.2	B60AS	B60CAS
P6SMBJ64AS	P6SMBJ64CAS	64	71.1	78.6	1	1	1	103	5.9	B64AS	B64CAS
P6SMBJ70AS	P6SMBJ70CAS	70	77.8	86	1	1	1	113	5.3	B70AS	B70CAS
P6SMBJ75AS	P6SMBJ75CAS	75	83.3	92.1	1	1	1	121	5	B75AS	B75CAS

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Electrical Characteristics (T_A = 25 °C unless otherwise noted)

Part Number		V_{RWM}	V_{BR}			I_R @V_{RWM}		V_C@I_{PP}		Marking Code	
			Min.	Max.	I_T	uA					
UNI	BI	V	V	V	mA	UNI	BI	V	A	UNI	BI
600W Transient Voltage Suppressor											
P6SMBJ78AS	P6SMBJ78CAS	78	86.7	95.8	1	1	1	126	4.8	B78AS	B78CAS
P6SMBJ85AS	P6SMBJ85CAS	85	94.4	104	1	1	1	137	4.4	B85AS	B85CAS
P6SMBJ90AS	P6SMBJ90CAS	90	100	111	1	1	1	147	4.1	B90AS	B90CAS
P6SMBJ100AS	P6SMBJ100CAS	100	111	123	1	1	1	162	3.7	B100AS	100CAS
P6SMBJ110AS	P6SMBJ110CAS	110	122	135	1	1	1	177	3.4	B110AS	110CAS
P6SMBJ120AS	P6SMBJ120CAS	120	133	147	1	1	1	193	3.1	B120AS	120CAS
P6SMBJ130AS	P6SMBJ130CAS	130	144	159	1	1	1	209	2.9	B130AS	130CAS
P6SMBJ150AS	P6SMBJ150CAS	150	167	185	1	1	1	243	2.5	B150AS	150CAS
P6SMBJ160AS	P6SMBJ160CAS	160	178	197	1	1	1	259	2.3	B160AS	160CAS
P6SMBJ170AS	P6SMBJ170CAS	170	189	209	1	1	1	275	2.2	B170AS	170CAS
P6SMBJ180AS	P6SMBJ180CAS	180	198	222	1	1	1	292	2.1	B180AS	180CAS
P6SMBJ190AS	P6SMBJ190CAS	190	209	243.2	1	1	1	308	2	B190AS	190CAS
P6SMBJ200AS	P6SMBJ200CAS	200	220	247	1	1	1	324	1.9	B200AS	200CAS
P6SMBJ210AS	P6SMBJ210CAS	210	231	268.8	1	1	1	340	1.8	B210AS	210CAS
P6SMBJ220AS	P6SMBJ220CAS	220	242	272	1	1	1	356	1.7	B220AS	220CAS

Note:

1. Non-repetitive current pulse, per Fig.3 and derated above T_A=25°C per Fig.2
2. Mounted on 100cm^2 copper pads to each terminal
3. Mounted on a FR4 PCB, single-sided copper, mini pad

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TYPICAL CHARACTERISTIC CURVES

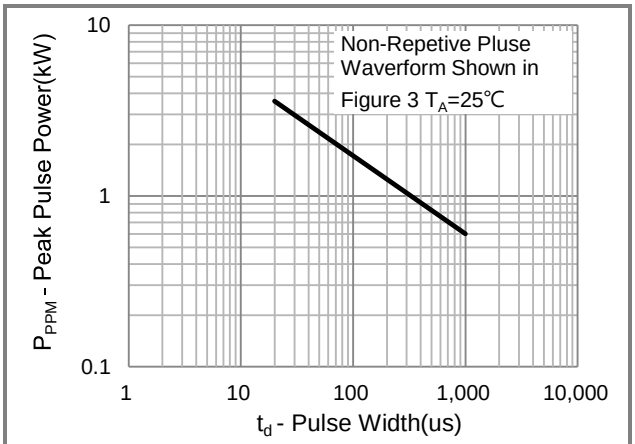


Fig.1 Pulse Power Rating Curve

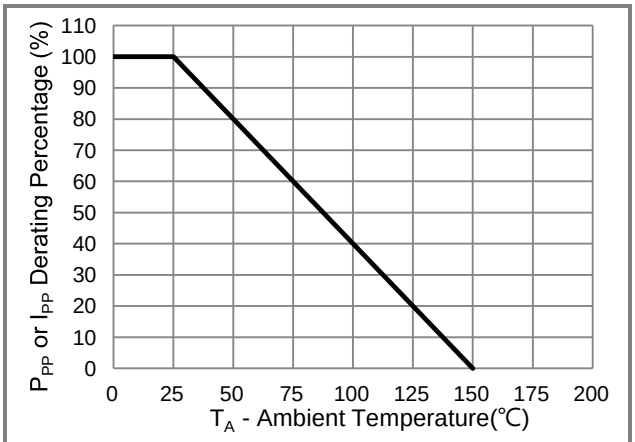


Fig.2 Derating Curve

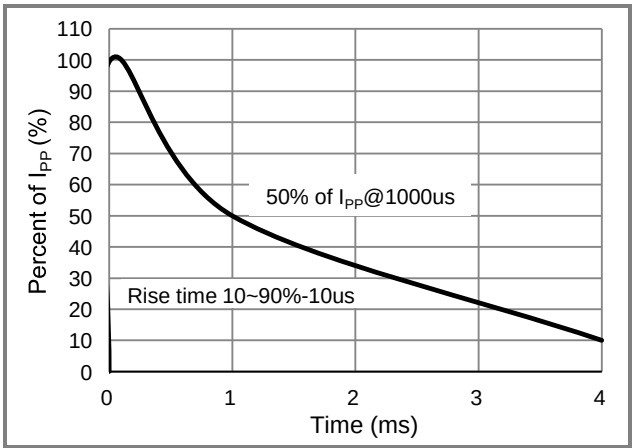


Fig.3 10/1000us Pulse Waveform

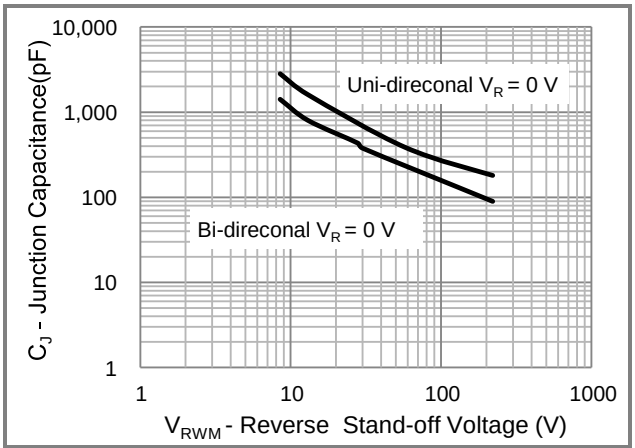


Fig.4 Typical Capacitance

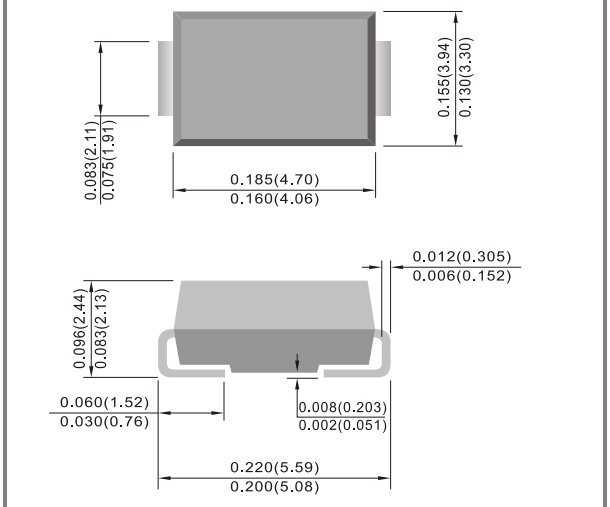
P6SMBJ8.5AS ~ P6SMBJ220CAS Series

Part No. Packing Code Version

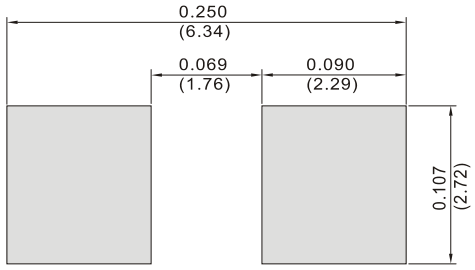
Part No. Packing Code	Package Type	Packing Type	Marking	Version
P6SMBJxxxxAS_R1_00001	SMB	0.8K pcs / 7” reel	See Table	Halogen free

Packaging Information & Mounting Pad Layout

SMB Dimension — Unit: inch(mm)



SMB Pad Layout — Unit: inch(mm)



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