Transient Voltage Suppressors (TVS) Data Sheet

FEATURE

- Plastic package.
- Glass passivated chip junction in P600 Package
- Excellent clamping capability.
- Low zener impedance.
- 8000W peak pulse power capability on 10/1000μs waveform.
- Fast response time: typically less than 1.0ps from 0 Volts to BV min.
- High temperature soldering guaranteed: 265℃/10 seconds
- AEC-Q101 qualified (Automotive grade with suffix "Q".)
- Expsemi electronics

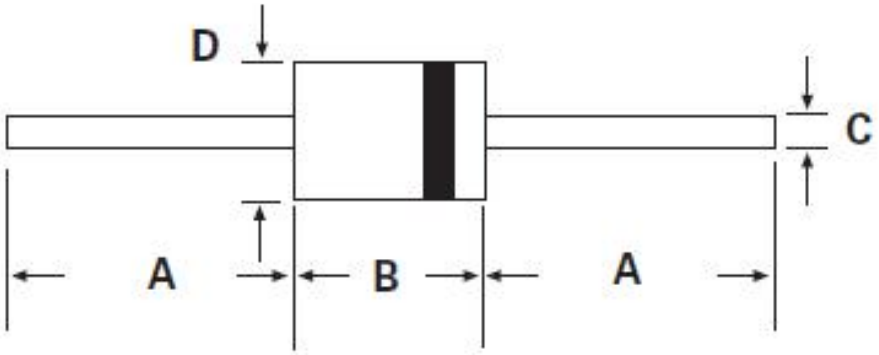
MECHANICAL DATE

- Case: JEDEC P600 Molded Plastic.
- Terminals: Axial leads, solderable per MIL-STD-750, Method 2026.
- Polarity: Color band denoted cathode except bidirectional.
- Mounting Position: Any.

ABSOLUTE RATINGS

RATING	SYMBOL	VALUE	UNITS
Peak Pulse Power Dissipation on 10/1000us waveform (Note1, Fig.1).	PPPM	8000	Watts
Peak Pulse Current of on 10/1000us waveform.(Note1,Fig.3)	IPPM	See Table	Amps
Steady State Power Dissipation at TL =75℃,Lead lengths.375", (9.5mm) (Fig.5).	PM(AV)	8	Watts
Peak Forward Surge Current,8.3ms Single Half Sine-Wave Superimposed on Rated Load, (JEDEC Method) (Note 2,Fig.6).	IFSM	400	Amps
Operating junction and Storage Temperature Range.	TJ , TSTG	-55 to +150	℃

DIMENSIONS



P600

Item	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	25.40	-	1.000	-
B	8.60	9.10	0.340	0.360
C	1.22	1.32	0.048	0.052
D	8.60	9.10	0.340	0.360

ELECTRICAL CHARACTERISTICS (Ta=25℃)@2CHIPS

Diode Type		Reverse StAnd-Off VoltAge	BreAkdown VoltAge@IT		Reverse LeAkAge @VRWM	Test Current	PeAk Pulse Current	MAximum ClAmping VoltAge @IPP
Uni	Bi	VR(V)	VBL(V)	VBH(V)	IR(uA)	IT(mA)	IPP(A)	VCH(V)
8KP11A	8KP11CA	11	12.2	13.5	5000	50	439.6	18.2
8KP12A	8KP12CA	12	13.3	14.7	5000	50	402.0	19.9
8KP13A	8KP13CA	13	14.4	15.9	1500	50	372.1	21.5
8KP14A	8KP14CA	14	15.6	17.2	500	50	344.8	23.2
8KP10A	8KP10CA	15	16.7	18.5	150	5	327.9	24.4
8KP16A	8KP16CA	16	17.8	19.7	50	5	307.7	26
8KP17A	8KP17CA	17	18.9	20.9	25	5	289.9	27.6
8KP18A	8KP18CA	18	20	22.1	15	5	274.0	29.2
8KP20A	8KP20CA	20	22.2	24.5	2	5	246.9	32.4
8KP22A	8KP22CA	22	24.4	26.9	2	5	225.4	35.5
8KP24A	8KP24CA	24	26.7	29.5	2	5	205.7	38.9
8KP26A	8KP26CA	26	28.9	31.9	2	5	190.0	42.1
8KP28A	8KP28CA	28	31.1	34.4	2	5	176.2	45.4
8KP30A	8KP30CA	30	33.3	36.8	2	5	165.3	48.4
8KP33A	8KP33CA	33	36.7	40.6	2	5	150.1	53.3
8KP36A	8KP36CA	36	40	44.2	2	5	137.7	58.1
8KP40A	8KP40CA	40	44.4	49.1	2	5	124.0	64.5
8KP43A	8KP43CA	43	47.8	52.8	2	5	115.3	69.4
8KP45A	8KP45CA	45	50	55.3	2	5	110.0	72.7
8KP48A	8KP48CA	48	53.3	58.9	2	5	103.4	77.4
8KP51A	8KP51CA	51	56.7	62.7	2	5	97.1	82.4
8KP54A	8KP54CA	54	60	66.3	2	5	91.8	87.1
8KP58A	8KP58CA	58	64.4	71.2	2	5	85.5	93.6
8KP60A	8KP60CA	60	66.7	73.7	2	5	82.6	96.8
8KP64A	8KP64CA	64	71.1	78.6	2	5	77.7	103
8KP70A	8KP70CA	70	77.8	86	2	5	70.8	113
8KP75A	8KP75CA	75	83.3	92.1	2	5	66.1	121
8KP78A	8KP78CA	78	86.7	95.8	2	5	63.5	126
8KP85A	8KP85CA	85	94.4	104	2	5	58.4	137
8KP90A	8KP90CA	90	100	111	2	5	54.8	146
8KP100A	8KP100CA	100	111	123	2	5	49.4	162
8KP110A	8KP110CA	110	122	135	2	5	45.2	177
8KP120A	8KP120CA	120	133	147	2	5	41.5	193
8KP130A	8KP130CA	130	144	159	2	5	38.3	209
8KP100A	8KP100CA	150	167	185	2	5	32.9	243
8KP160A	8KP160CA	160	178	197	2	5	30.9	259
8KP170A	8KP170CA	170	189	209	2	5	29.1	275
8KP180A	8KP180CA	180	200	221	2	5	27.4	292
8KP190A	8KP190CA	190	211	233	2	5	25.8	310
8KP200A	8KP200CA	200	222	245	2	5	24.3	329.2
8KP210A	8KP210CA	210	233	258	2	5	22.9	349.5
8KP220A	8KP220CA	220	244	270	2	5	21.6	371.1
8KP250A	8KP250CA	250	277	306	2	5	18.8	425

RATINGS AND CHARACTERISTIC CURVES (TA=25℃ unless otherwise noted)

Figure 1 - Peak Pulse Power Rating Curve

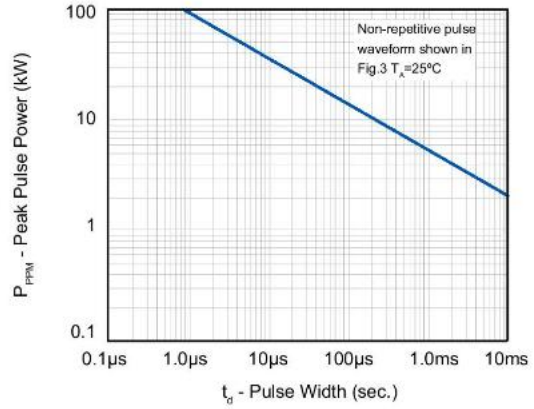


Figure 2 - Pulse Derating Curve

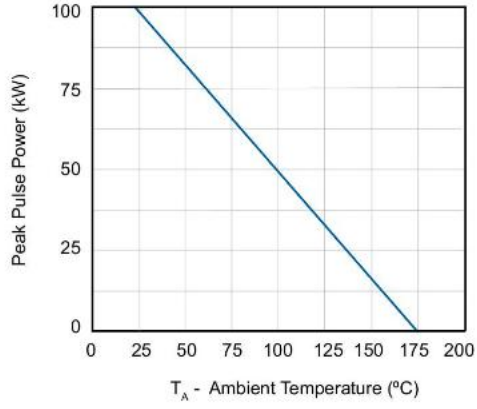


Figure 3 - Pulse Waveform

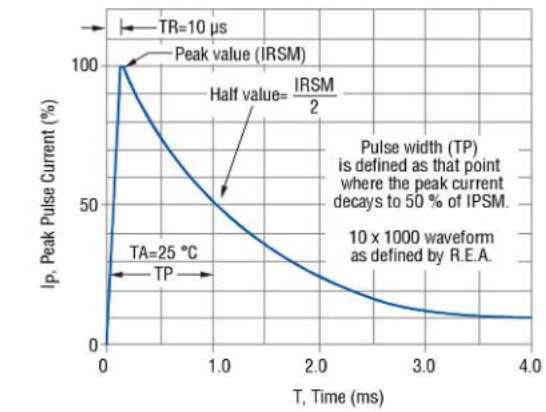


Figure 4 - Typical Junction Capacitance

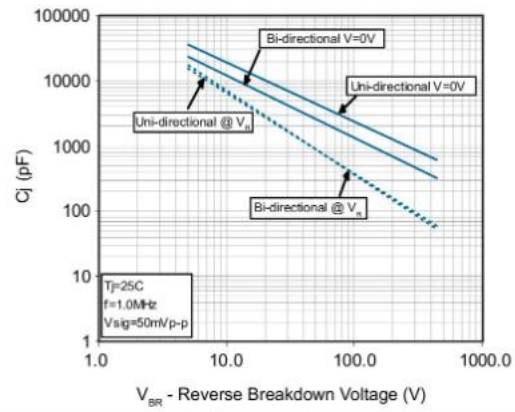


Figure 5 - Pulse Derating Curve

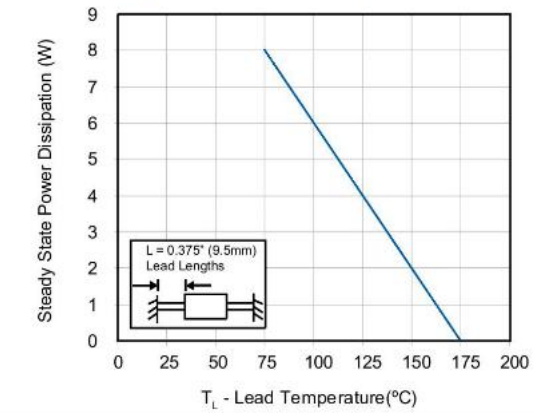


Figure 6 - Maximum Non-Repetitive Surge Current