

## HIGH POWERED TVS COMPONENT



**SMT0-218(TAB) PACKAGE**

### DESCRIPTION

The SKCxxxCS series are high current, bidirectional transient voltage suppressors that are designed for AC line protection and high-power DC bus clamping applications. These devices provide a clamping voltage lower than the avalanche voltage; any voltage rise due to increased current conduction is contained to a minimum, providing the best possible protection level. The SKCxxxCS series can be connected in series or in parallel to create very high capability protection solutions. These devices will also provide protection in accordance with IEC 61000-4-2, IEC 61000-4-4 and IEC 61000-4-5 requirements. The SKCxxxCS series is available in a SMT0-218(Tab) package configuration and is rated at 1600 Watts peak pulse power (8/20 $\mu$ s) per line.

### FEATURES

- Compatible with IEC 61000-4-2 (ESD): Air  $\pm$ 30kV, Contact  $\pm$ 30kV
- Compatible with IEC 61000-4-4 (EFT): 40A, 5/50ns
- Compatible with IEC 61000-4-5 (Surge)
- 1600 kilowatts Peak Pulse Power per Line(tp = 8/20 $\mu$ s)
- High Current Capability
- Surface Mount Device
- Excellent Clamping Voltage
- Glass Passivated Junction
- Bidirectional Configuration
- Low Slope Resistance
- Repetition Rate (Duty Cycle): 0.01%
- Hazardous Substance Free
- RoHS Complaint (Exemption #7)

### APPLICATIONS

- DC & AC Applications
- Remote Transmission Lines
- Industrial Wiring

### MECHANICAL CHARACTERISTICS

- SMT0-218 (Tab) Package
- Approximate Weight: 6.5grams
- High Temperature Soldering: 260°C / 10 seconds at Terminals
- Flammability Rating UL 94V-0
- Marking: Part Number, Date Code, Logo

### CIRCUIT DIAGRAM



**TYPICAL DEVICE CHARACTERISTICS**
**MAXIMUM RATINGS @ 25°C Unless Otherwise Specified**

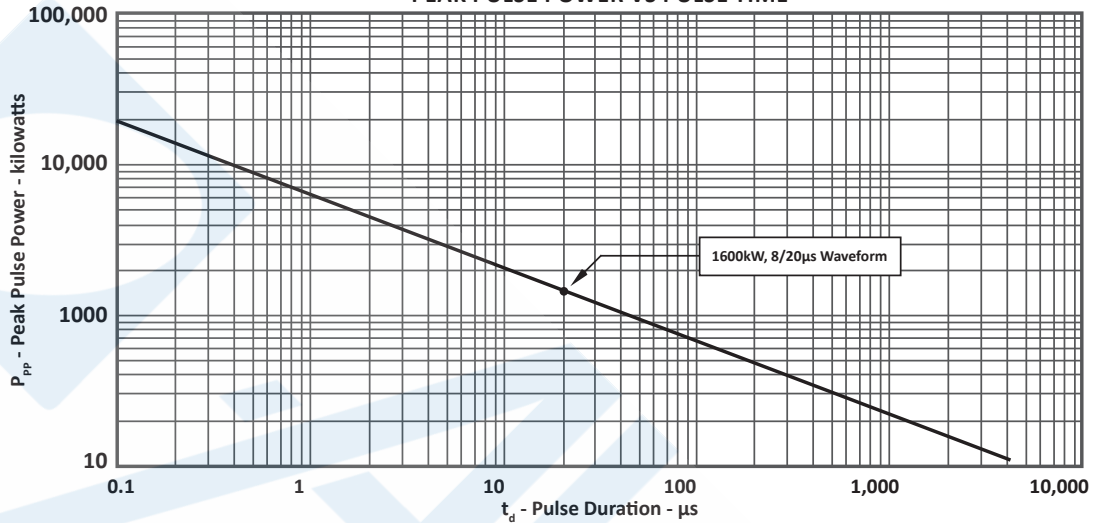
PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power (tp = 8/20μs) - See Figure 1	$P_{PP}$	1600	kilowatts
Operating Temperature	$T_L$	-55 to 150	°C
Storage Temperature	$T_{STG}$	-55 to 150	°C
Current Rating $I_{PP}$ @ 8/20μs	$I_{PP}$	10	kA

**ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified**

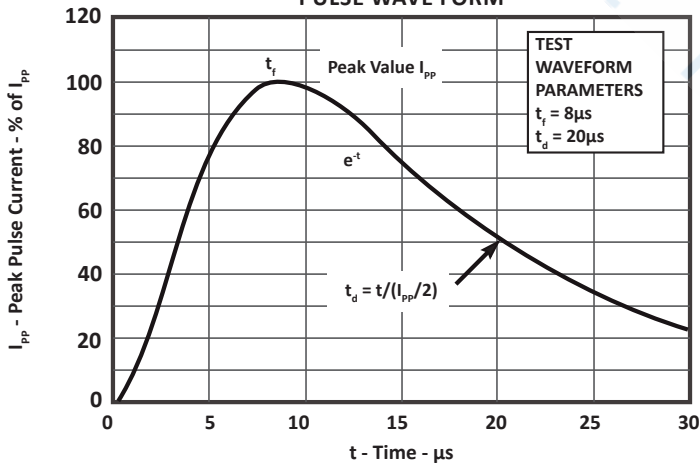
PART NUMBER	REVERSE STAND-OFF VOLTAGE  $V_{WM}$ VOLTS	MINIMUM BREAKDOWN VOLTAGE  $V_{(BR)}$ @ $I_T$ VOLTS	TEST CURRENT  @ $I_T$ mA	CURRENT RATING  8/20μs kA	MAXIMUM CLAMPING VOLTAGE  @ $I_{PP}$ $V_C$ VOLTS	REVERSE LEAKAGE CURRENT  @ $V_{DC}$ $I_R$ μA
SKC-058CS	58.0	64.0	10	10	110.0	5
SKC-066CS	66.0	72.0	10	10	120.0	5
SKC-076CS	76.0	83.0	10	10	140.0	5
SKC-086CS	86.0	95.0	10	10	157.0	5

**TYPICAL DEVICE CHARACTERISTICS**

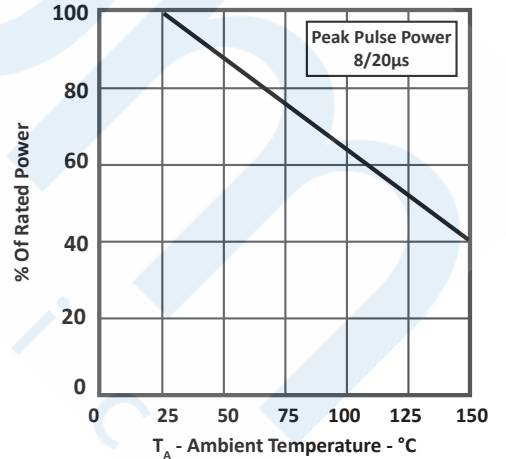
**FIGURE 1  
PEAK PULSE POWER VS PULSE TIME**



**FIGURE 2  
PULSE WAVE FORM**



**FIGURE 3  
POWER DERATING CURVE**

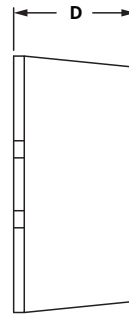


## PACKAGE INFORMATION

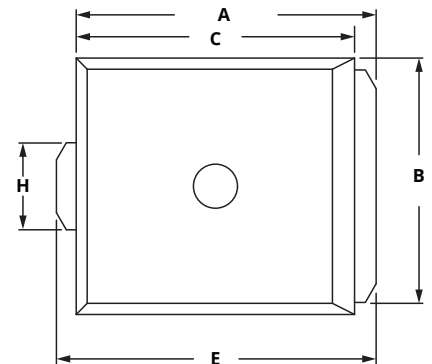
## OUTLINE DIMENSIONS

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	17.00	17.60	0.669	0.693
B	14.50	15.10	0.571	0.594
C	15.75	16.35	0.620	0.644
D	6.85	7.20	0.270	0.283
E	18.20	18.70	0.717	0.736
F	13.10	13.60	0.516	0.535
G	3.15	3.75	0.124	0.148
H	4.85	5.15	0.191	0.203
J	0.50	0.70	0.020	0.028
L	13.20	13.60	0.520	0.535

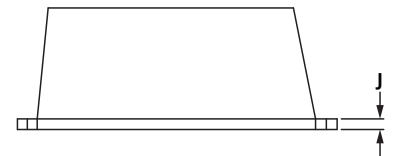
SIDE VIEW



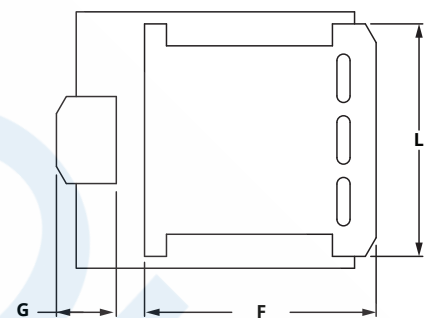
TOP VIEW



SIDE VIEW

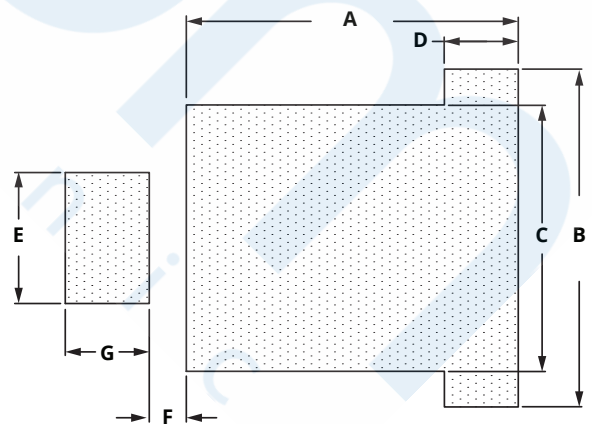


BOTTOM VIEW

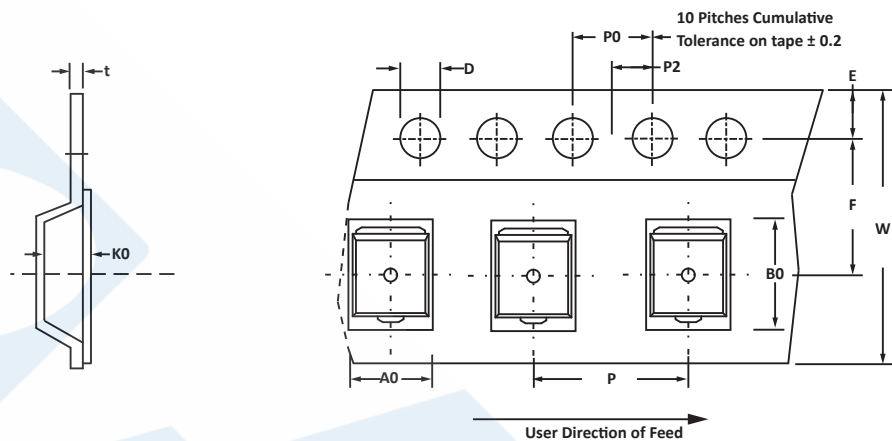


## PAD LAYOUT DIMENSIONS

DIM	MILLIMETERS	INCHES
	NOMINAL	NOMINAL
A	13.46	0.530
B	13.69	0.539
C	10.80	0.425
D	3.00	0.118
E	5.31	0.209
F	1.50	0.059
G	3.40	0.134



## TAPE AND REEL



## SPECIFICATIONS

REEL DIA.	TAPE WIDTH	A0	B0	K0	D	E	F	W	P0	P2	P	tmax
330mm (13.00")	36mm	15.1 ± 0.30	18.8 ± 0.30	16.5 ± 0.10	1.50 ± 0.10	1.75 ± 0.10	14.2 ± 0.2	36.0 ± 0.5	4.00 ± 0.10	2.0 ± 0.20	20.0 ± 0.20	0.25

## NOTES

- Dimensions are in millimeters.
- Surface mount product is taped and reeled in accordance with EIA-481.
- Marking on Part - marking code (see page 2) and pin one defined by dot on package.

## ORDERING INFORMATION

BASE PART NUMBER (xx = Voltage)	LEADFREE SUFFIX	TAPE SUFFIX	QTY/REEL	REEL SIZE	TUBE QTY
SKCxxxCS	N/A	-T13	400	13"	n/a

This device is only available in a Lead-Free configuration.

## COMPANY INFORMATION

### COMPANY PROFILE

In business more than 30 years, ProTek Devices™ is a privately held semiconductor company. The company offers a product line of overvoltage protection and overcurrent protection components. These include transient voltage suppressor array (TVS arrays) avalanche breakdown diode, steering diode TVS array and electronics SMD chip fuses. These components deliver circuit protection in electronic systems from numerous overvoltage and overcurrent events. They include lightning; electrostatic discharge (ESD); nuclear electromagnetic pulses (NEMP); inductive switching; and electromagnetic interference (EMI) / radio frequency interference (RFI). ProTek Devices also offers LED wafer die for ESD protection and related high frequency products. ProTek Devices is an ISO 9001 certified company.

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