

Features

- · Uni-Directional ESD Protection of One Line
- · Low Reverse Clamping Voltage
- · Low Leakage Current
- Fast Response Time
- · Moisture Sensitivity Level 1
- · Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

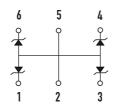
Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C

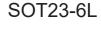
MCC Part Number	Device Marking
ESD12VK4	12VK4

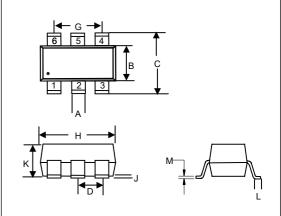
IEC61000-4-2(ESD)	Air Contact	±25KV ±25KV	
Peak Pulse Current(8/20μs)	I _{PP}	9A	
Peak Pulse Power (8/20us)	P _{PK}	220W	

Internal Structure



ESD Protection Device



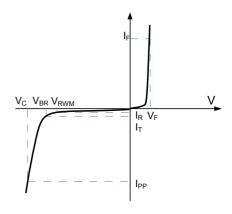


DIMENSIONS					
DIM INCHES		MM		NOTE	
DIIVI	MIN	MAX	MIN	MAX	NOTE
Α	0.012	0.020	0.30	0.50	
В	0.051	0.070	1.30	1.80	
С	0.087	0.126	2.20	3.20	
D	0.037		0.95		TYP.
G	0.074		1.90		TYP.
Н	0.106	0.122	2.70	3.10	
J	0.002	0.006	0.05	0.15	
K	0.030	0.051	0.75	1.30	
L	0.012	0.024	0.30	0.60	
M	0.003	0.008	0.08	0.22	



ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Symbol	Parameter		
V_{RWM}	Peak Reverse Working Voltage		
I _R	Reverse Leakage Current @ V _{RWM}		
V_{BR}	Breakdown Voltage @ I _T		
lτ	Test Current		
I _{PP}	Maximum Reverse Peak Pulse Current		
V _C	Clamping Voltage @ I _{PP}		
P _{PP}	Peak Pulse Power		
CJ	Junction Capacitance		
I _F	Forward Current		
V _F	Forward Voltage @ I _F		

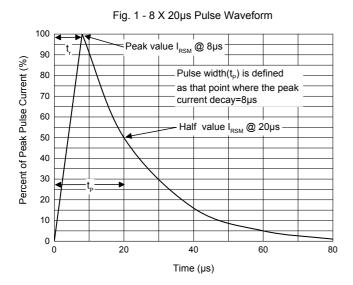


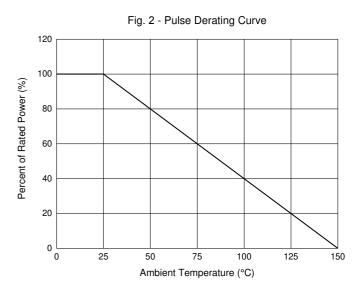
Electrical Characteristics @ 25°C (Unless Otherwise Specified)

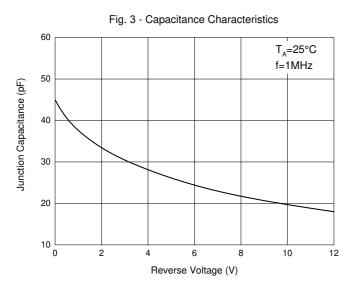
Parameter	Symbol	Conditions	Min.	Тур.	Max.	Units
Reverse Working Voltage	V_{RWM}				12	V
Reverse Breakdown Voltage	V_{BR}	I _T = 1mA	13.3		16.5	V
Reverse Leakage Current	I _R	V _{RWM} =12V			1	μA
Forward Voltage	V _F	I _F = 10mA			0.9	V
Clamping Voltage	V _C	I _{PP} =9A, t _P =8/20μs			24	V
Junction Capacitance	CJ	$V_R = 0V$, $f = 1MHz$		45		pF

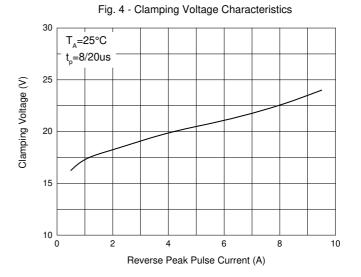


Curve Characteristics











Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

Note: Adding "-HF" Suffix for Halogen Free, eg. Part Number-TP-HF

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Rev.3-2-12012020 4/4 MCCSEMI.COM