

300 WATT SMD TVS ARRAY

05-00

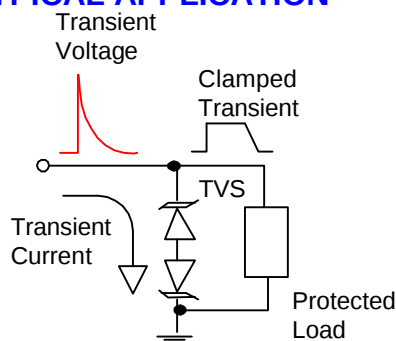
FEATURES

- I/O Transient Protection
- JEDEC SO-14 Package / UL 94V-0
- Protects Eight I/O Lines
- Low Leakage Current
- Low Operating & Clamping Voltages
- Solid-State Technology
- Working Voltages: 5V, 12V, 15V, and 24V

APPLICATIONS

- Cell phone-Handsets & Accessories
- Automotive Electronics
- Personal Digital Assistants & Pagers
- Desktop PC & Servers
- Notebook, Laptop & Palmtop Computers
- Instrumentation
- Peripherals

TYPICAL APPLICATION

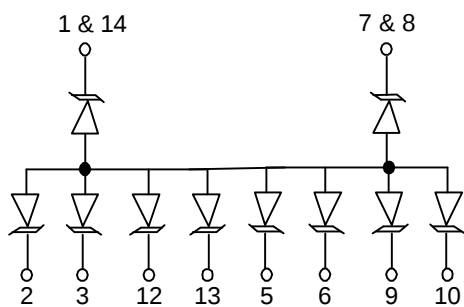


Transient current is diverted to ground through TVS:
The voltage seen by the protected load is limited to the clamping voltage level of the TVS.

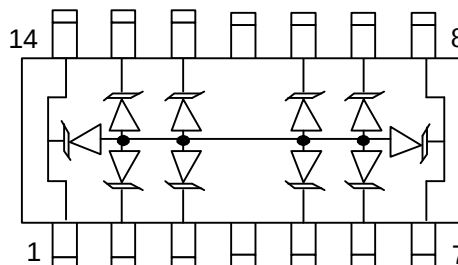
MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Peak Pulse Power ($t_p=8/20\mu s$)	P_{pk}	300	Watts
EDS Voltage (HBMperIEC1000-4-2)	V_{pp}	>25kV	kV
Lead Soldering Temperature	T_L	260(10sec.)	°C
Operating Temperature	T_J	-55 to +125	°C
Storage Temperature	T_{STG}	-55 to +150	°C

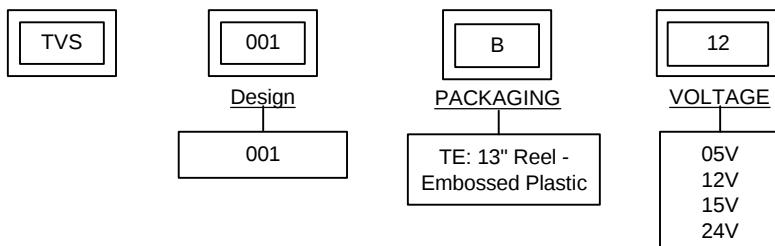
CIRCUIT



PACKAGE LAYOUT



ORDERING & SPECIFYING INFORMATION*



*Please Note: KSE's Part Numbers Do Not Contain any Spaces or Hyphens.

NOTICE: The information contained on this data sheet is believed to be accurate and up to date. KOA Speer Electronics reserves the right to change these specifications without notice.

ELECTRICAL CHARACTERISTICS

TVS001B05						
Parameter	Symbol	Condition	Min	Typ.	Max.	Units
Reverse Stand-off Voltage	V_{RWM}				5	V
Breakdown Voltage	V_{BR}	$I_T=1mA$	6			V
Reverse Leakage Current	I_R	$V_{RWM}=5V, T=25^{\circ}C$			20	μA
Clamping Voltage	V_C	$I_{pp}=1A, tp=8/20\mu s$			9.8	V
Max Peak Pulse Current	I_{pp}	$T_p=8/20\mu s$			17	A
Junction Capacitance	C_j	Between I/O pins and Gnd $V_R=0V, f=1MHz$		350		pF

TVS001B12						
Parameter	Symbol	Condition	Min	Typ.	Max.	Units
Reverse Stand-off Voltage	V_{RWM}				12	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	13.3			V
Reverse Leakage Current	I_R	$V_{RWM}=12V, T=25^{\circ}C$			1	μA
Clamping Voltage	V_C	$I_{pp}=1A, tp=8/20\mu s$			19	V
Max Peak Pulse Current	I_{pp}	$T_p=8/20\mu s$			12	A
Junction Capacitance	C_j	Between I/O pins and Gnd $V_R=0V, f=1MHz$		120		pF

TVS001B15						
Parameter	Symbol	Condition	Min	Typ.	Max.	Units
Reverse Stand-off Voltage	V_{RWM}				15	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	16.7			V
Reverse Leakage Current	I_R	$V_{RWM}=15V, T=25^{\circ}C$			1	μA
Clamping Voltage	V_C	$I_{pp}=1A, tp=8/20\mu s$			24	V
Max Peak Pulse Current	I_{pp}	$T_p=8/20\mu s$			10	A
Junction Capacitance	C_j	Between I/O pins and Gnd $V_R=0V, f=1MHz$		75		pF

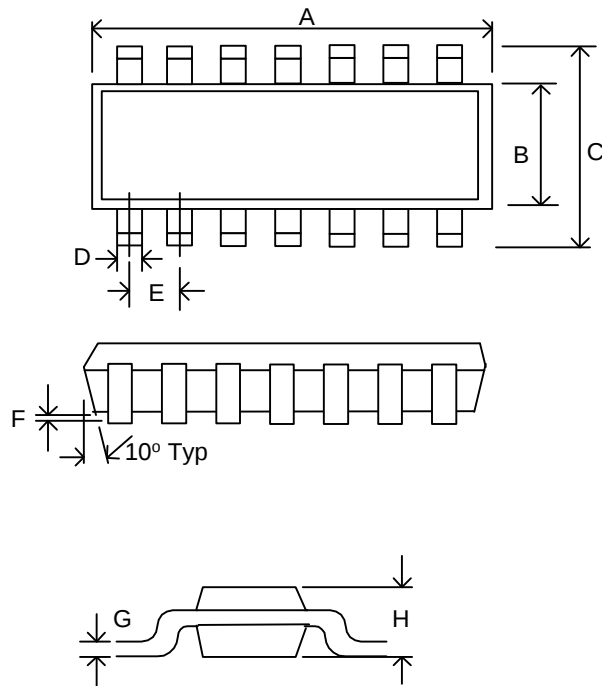
TVS001B24						
Parameter	Symbol	Condition	Min	Typ.	Max.	Units
Reverse Stand-off Voltage	V_{RWM}				24	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	26.7			V
Reverse Leakage Current	I_R	$V_{RWM}=24V, T=25^{\circ}C$			1	μA
Clamping Voltage	V_C	$I_{pp}=1A, tp=8/20\mu s$			40	V
Max Peak Pulse Current	I_{pp}	$T_p=8/20\mu s$			5	A
Junction Capacitance	C_j	Between I/O pins and Gnd $V_R=0V, f=1MHz$		50		pF

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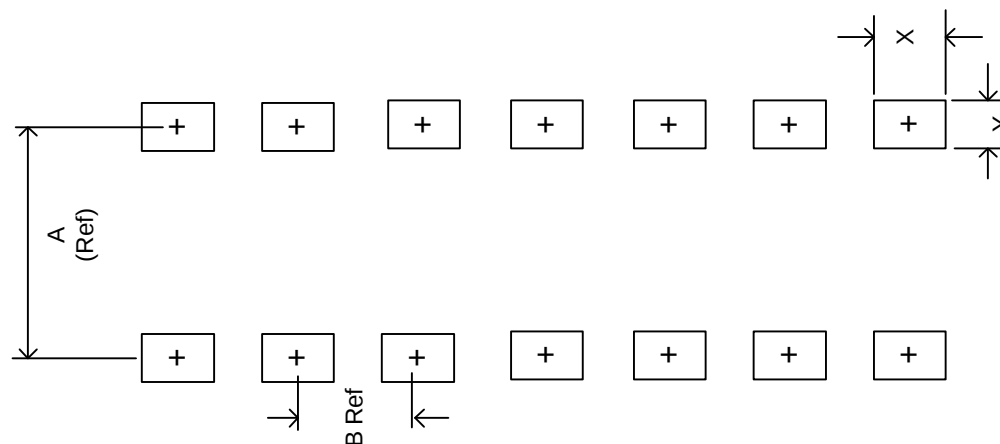
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DIMENSIONS



in (mm)	Min.	Max.
A	.337 (8.56)	.344 (8.74)
B	.150 (3.81)	.158 (4.01)
C	.228 (5.79)	.244 (6.20)
D	.013 (.33)	0.020 (.51)
E	.050 (1.27)	BSC BSC
F	.004 (.102)	.010 (.254)
G	.007 (.178)	.010 (.254)
H	.053 (1.34)	.069 (1.75)

LAND PATTERN



Dimensions		
	In.	mm.
A	.190	5.00
B	0.5	1.27
X	.025	.070
Y	.090	2.40