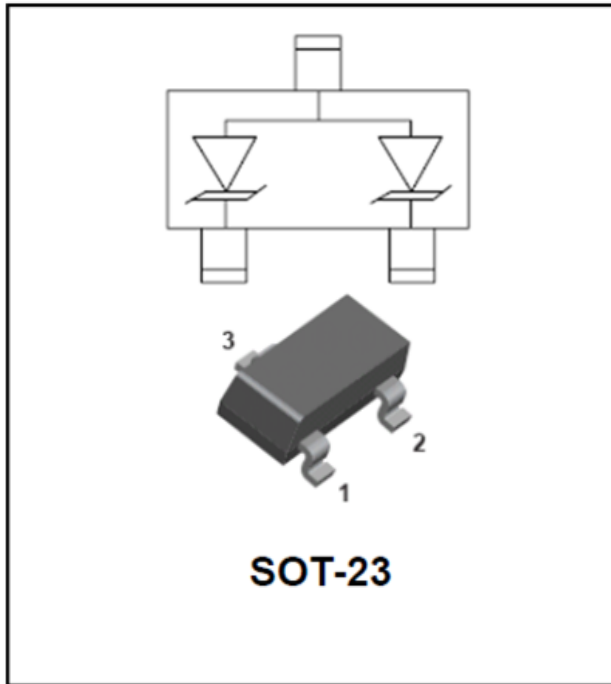


## 2-Line un-directional TVS Diode Array

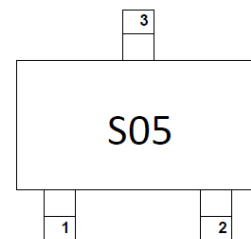


### Features

- 320W peak pulse power (8/20 $\mu$ s)
- Protects two un-directional lines
- Ultra low leakage: nA level
- Operating voltage: 5V
- Low clamping voltage
- RoHS Compliant

### Mechanical Characteristics

- Package: SOT-23
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound.
- Moisture Sensitivity: Level 1 per J-STD-020
- Marking Information: See Below



### ■Absolute Maximum Ratings (Ta=25°C unless otherwise specified)

PARAMETER	SYMBOL	VALUE	UNIT
Operating Temperature Range	T <sub>J</sub>	-55 to +125	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150	°C
ESD per IEC 61000-4-2 (Air)	V <sub>ESD</sub>	±30	KV
ESD per IEC 61000-4-2 (Contact)		±30	KV
Peak Pulse Power(8/20 $\mu$ s)	P <sub>PK</sub>	320	W
Peak Pulse Current(8/20 $\mu$ s)	I <sub>PP</sub>	23	A

### ■Electrical Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	Symbol	UNIT	Conditions	Min	Typ	Max
Reverse Working Voltage	V <sub>RWM</sub>	V				5
Reverse Leakage Current	I <sub>R</sub>	$\mu$ A	V <sub>RWM</sub> =5V any I/O pin to ground			0.5
Forward Voltage	V <sub>F</sub>	V	I <sub>F</sub> =10mA	0.2	0.8	1.2
Breakdown Voltage	V <sub>(BR)</sub>	V	I <sub>T</sub> =1mA	6		
Clamping Voltage	V <sub>C</sub>	V	I <sub>PP</sub> =1A (8 x 20 $\mu$ s pulse) any I/O pin to ground			8
Clamping Voltage	V <sub>C</sub>	V	I <sub>PP</sub> =23A (8 x 20 $\mu$ s pulse) any I/O pin to ground			14
Junction Capacitance	C <sub>J</sub>	pF	V <sub>R</sub> =0V, f=1MHz, any I/O pin to ground		160	



# ASM05

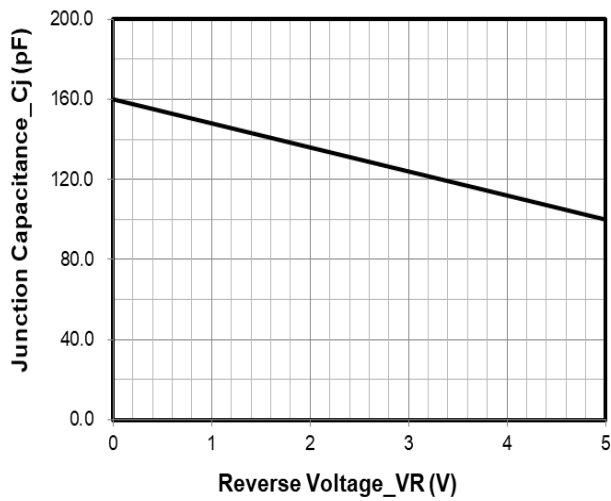
## ■ Thermal Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	ASM05
Thermal Resistance(Typical)	R <sub>θJ-A</sub>	°C/W	357
	R <sub>θJ-C</sub>	°C/W	143

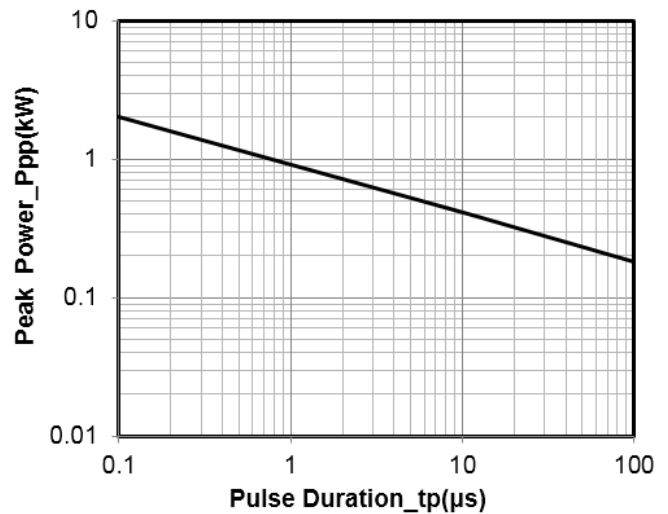
## ■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(mg)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ASM05	F2	Approximate 8	3000	30000	120000	7" reel

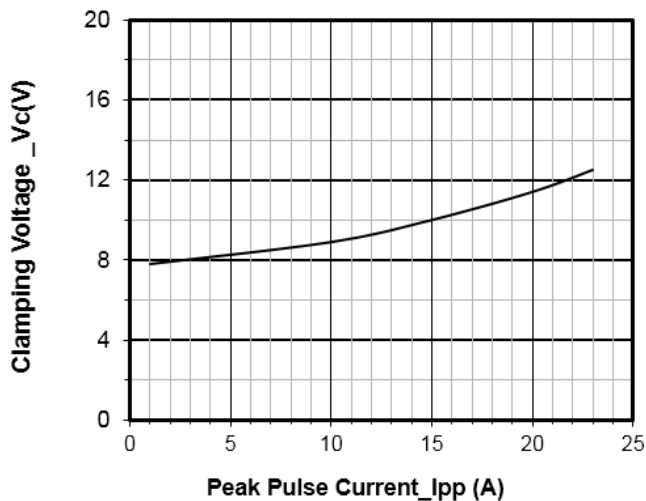
## ■ Characteristics (Typical)



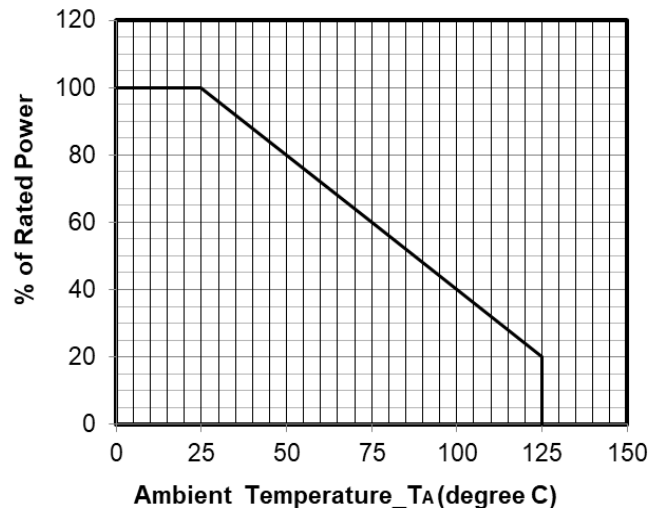
Junction Capacitance vs. Reverse Voltage



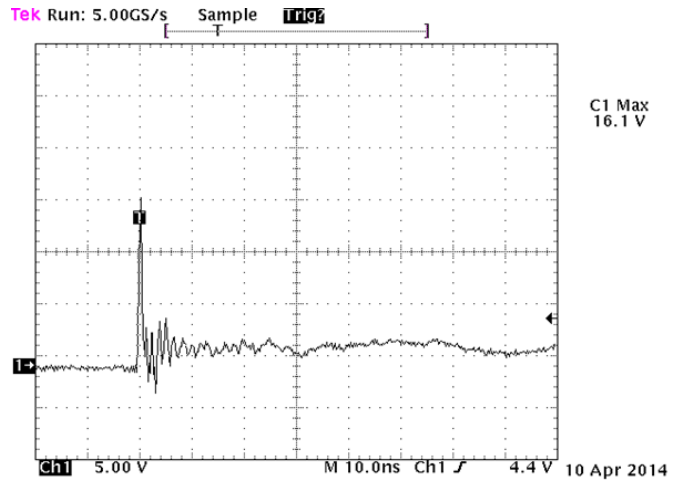
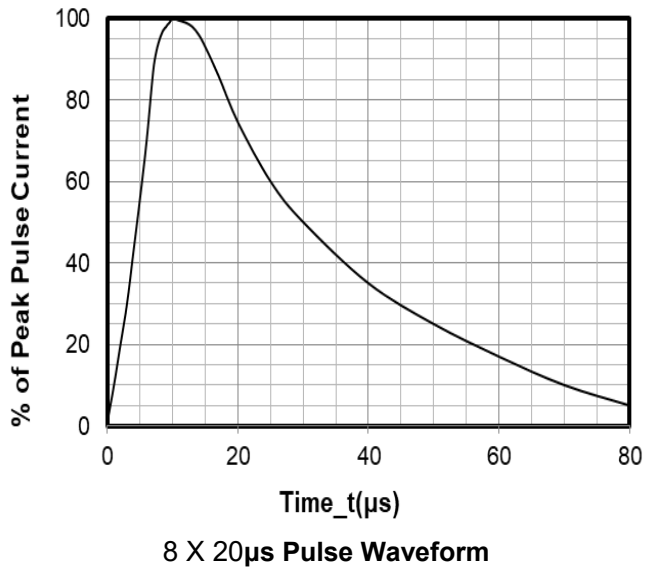
Peak Pulse Power vs. Pulse Time



Clamping Voltage vs. Peak Pulse Current

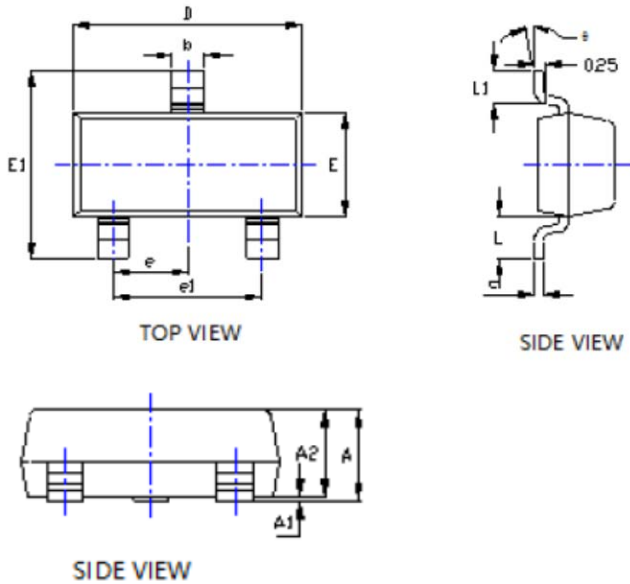


Power Derating Curve



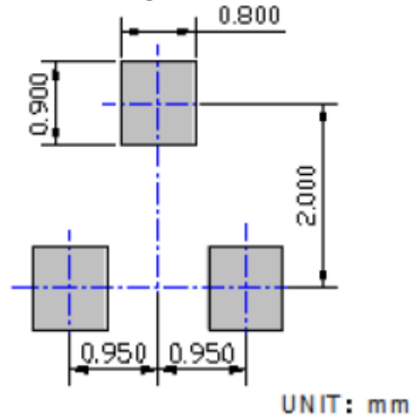
**Note: Data is taken with a 10x attenuator  
ESD Clamping Voltage  
8 kV Contact per IEC61000-4-2**

### ■ Outline Dimensions



SYMBOL	DIMENSIONS			
	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.035	0.045	0.900	1.150
A1	0.000	0.004	0.000	0.100
A2	0.035	0.041	0.900	1.050
b	0.012	0.020	0.300	0.500
c	0.004	0.008	0.100	0.200
D	0.110	0.118	2.800	3.000
E	0.047	0.055	1.200	1.400
E1	0.089	0.100	2.250	2.550
e	0.037TYP		0.950TYP	
e1	0.071	0.079	1.800	2.000
L	0.022REF		0.550REF	
L1	0.012	0.020	0.300	0.500
φ	0°	8°	0°	8°

### ■ Soldering Footprint





## ASM05

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