

TVS Diode Array for ESD and Latch-Up Protection

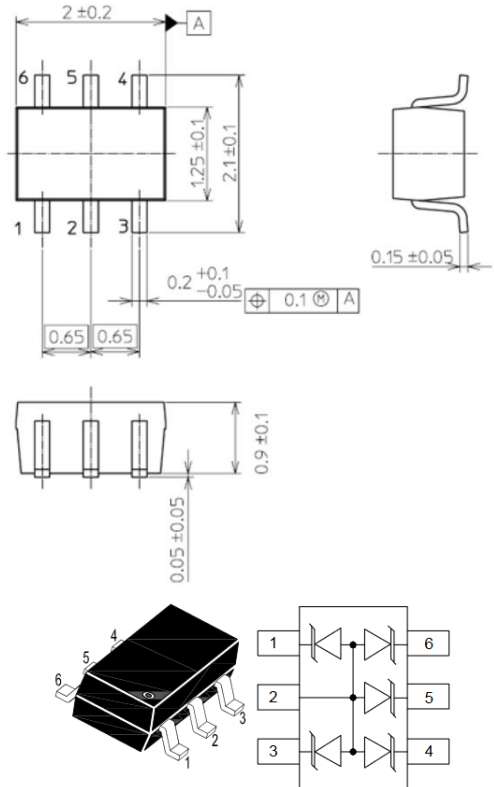
Primary characteristics			
Parameter	Symbol	Value	Unit
Breakdown voltage	V_{BR}	6.0	V
Peak pulse power (8/20 μ s)	P_{PPM}	100	W

Features

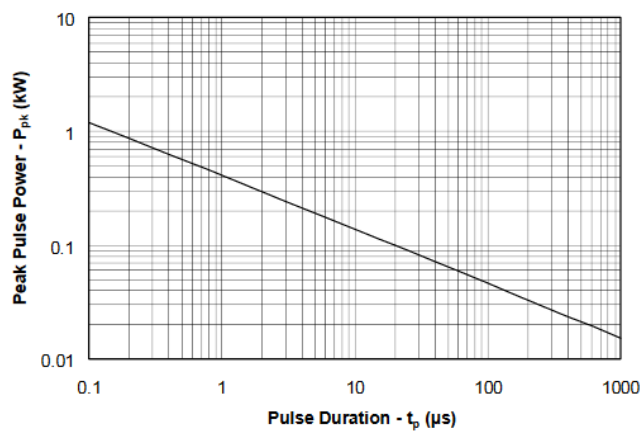
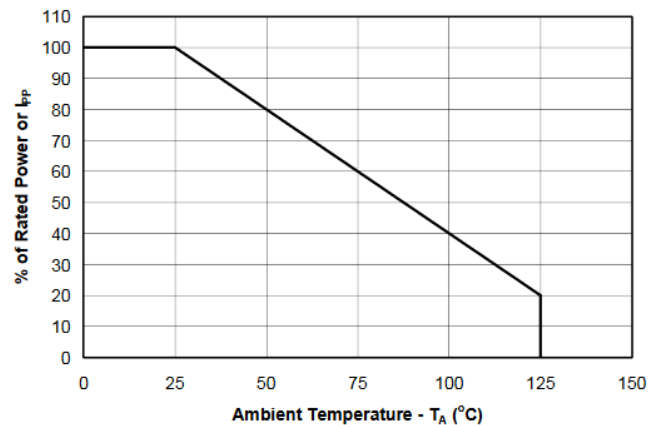
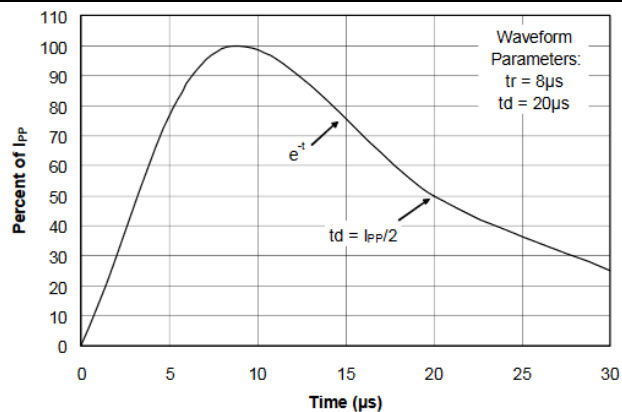
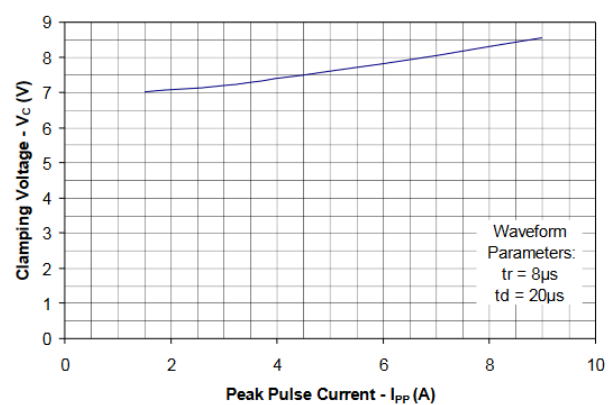
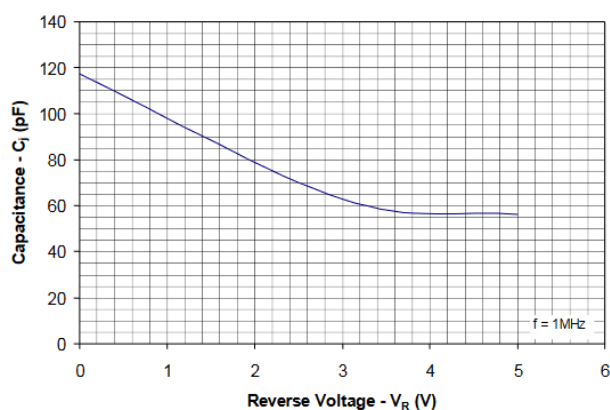
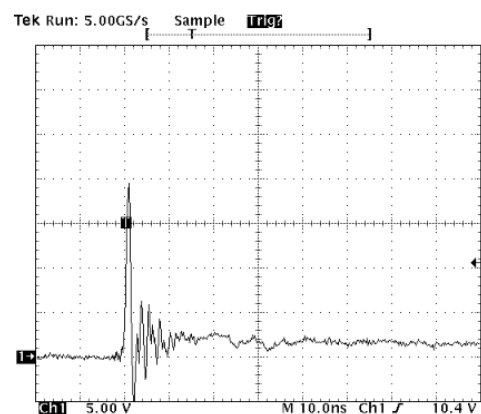
- **SOT-363** case for easy automatic insertion.
- Pb-free and **RoHS** compliant
- Protects 5 I/O lines
- Low leakage current
- Low operating and clamping voltages
- Solid state silicon avalanche technology

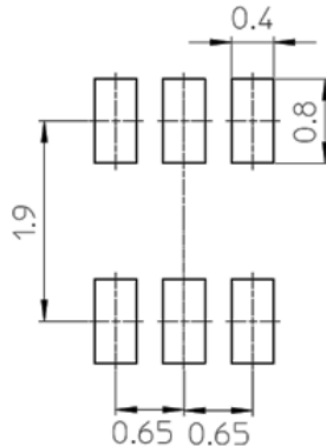
Applications

- Notebooks
- Portable instrumentation
- Digital cameras
- Peripherals
- MP3 players
- Cellular handsets and accessories, PDA's

Case dimensions	
 Top view dimensions: 2 ± 0.2, 1.25 ± 0.1, 2.1 ± 0.1, 0.65, 0.65, 0.2 ± 0.1, 0.1 ± 0.05, 0.15 ± 0.05. Side view dimensions: 0.9 ± 0.1, 0.05 ± 0.05. Cross-sectional view shows the internal structure with pins 1-6.	
SOT-363	
All dimensions in mm	

Maximum ratings and electrical characteristics ($T_a = 25^\circ\text{C}$)						
Characteristics	Test condition	Symbol	Value			Unit
			Min.	Typ.	Max.	
ESD per IEC 61000-4-2	Air	V_{ESD}	-	-	20	kV
	Contact		-	-	15	
Peak pulse power	$t_p=8/20\mu\text{s}$	P_{PK}	-	-	100	W
Operating temperature	-	T_J	-55	-	125	$^\circ\text{C}$
Storage temperature	-	T_{STG}	-55	-	150	$^\circ\text{C}$
Lead solder temperature	Maximum (10 second duration)	T_L	-	-	260	$^\circ\text{C}$
Peak pulse current	$t_p=8/20\mu\text{s}$	I_{PP}	-	-	8.0	A
Reverse stand-off voltage		V_{RWM}	-	-	5.0	V
Reverse breakdown voltage	$I_T=1.0\text{mA}$	V_{BR}	6.0	-	-	
Reverse leakage current	$V_{RWM}=36\text{V}$, $T=25^\circ\text{C}$	I_R	-	-	5.0	μA
Clamping voltage	$I_{PP}=5.0\text{A}$, $t_p=8/20\mu\text{s}$	V_C	-	-	9.8	V
	$I_{PP}=8.0\text{A}$, $t_p=8/20\mu\text{s}$		-	-	12.5	
Junction capacitance	$V_R=0\text{V}$, $f=1.0\text{MHz}$	C_J	-	-	130	pF

Non-repetitive peak pulse power vs. pulse time

Power derating curve

Pulse waveform

Clamping voltage vs peak pulse current

Capacitance vs. reverse voltage

ESD clamping characteristics (8.0kV contact discharge per IEC 61000-4-2)


Suggested soldering pad layout

SOT-363
Ordering information

Part Number	Marking	Package	Shipping Quantity
SMF05C	5C	SOT-363	3 000 pcs / 7" reel

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