PS05CBESC

Single Line TVS Diode for ESD Protection in Portable Electronics

Protection in Portable Electronics Applications.

FEATURES

ESC (Lead-type)

· Transient protection for data lines to

- IEC61000-4-2(ESD) : Air mode ±30kV / Contact mode ±30kV
- IEC61000-4-4(EFT) : 80A(tp=5/50ns)
- IEC61000-4-5(Surge) : 6A(tp=8/20 μs)

· Low capacitance C_T = 9pF(Max)

· Bi-directional, symmertrical working voltage up to : V_{RWM} = ±5V

· Package Size 1.2×0.8×0.6mm

· Low reverse current : <10nA typical (V_{RWM}=5V)

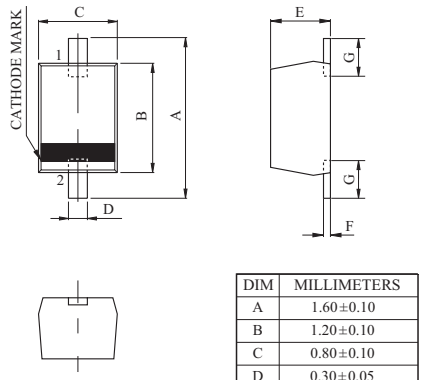
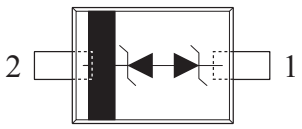
· Suffix **U** : Qualified to AEC-Q101.

ex) PS05CBESC-RTK/H**U**

PRODUCT DESCRIPTION

· Molding compound flammability rating : UL 94V-0

· Pb-Free, Halogen-Free, RoHs Compliant

Package dimensions (ESC)	Pin configurations (Bi-directional)
	

DIM	MILLIMETERS
A	1.60±0.10
B	1.20±0.10
C	0.80±0.10
D	0.30±0.05
E	0.60±0.10
F	0.13±0.05
G	0.20±0.10

1. CATHODE 2. CATHODE

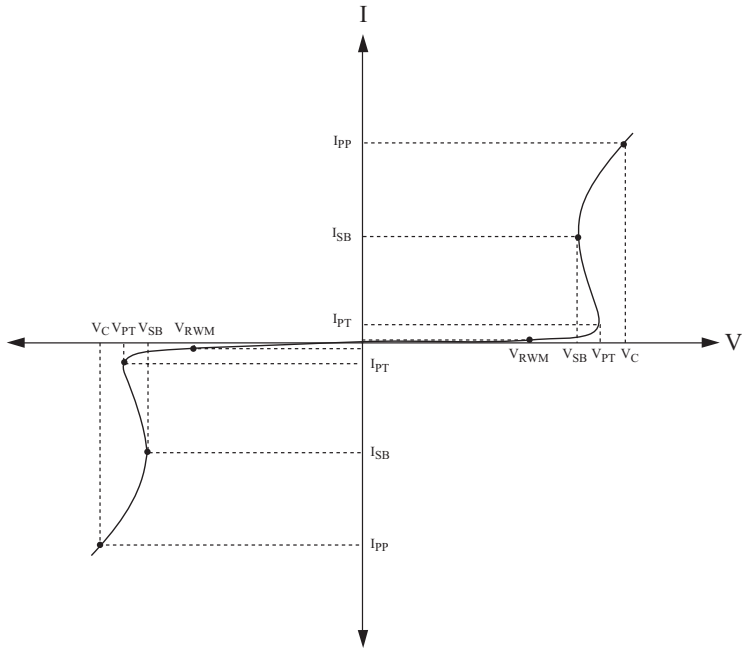
ORDERING INFORMATION

Part Number	Qty per Reel	Reel Size	Marking code
PS05CBESC-RTK	3,000	7 inch	C5
PS05CBESC-RTL	6,000		

MAXIMUM RATING (Ta=25℃)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Peak Pulse Power (tp=8/20 μs)	P_{PK}	75	W
Peak Pulse Current (tp=8/20 μs)	I_{PP}	6	A
Junction Temperature	T_J	150	℃
Storage Temperature	T_{stg}	-55 150	℃

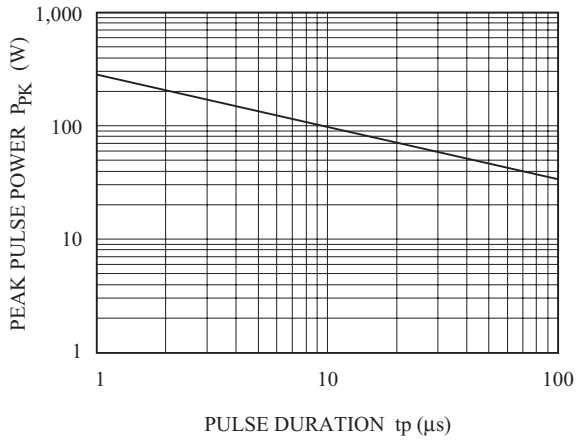
DEFINITIONS OF ELECTRICAL CHARACTERISTIC SYMBOL



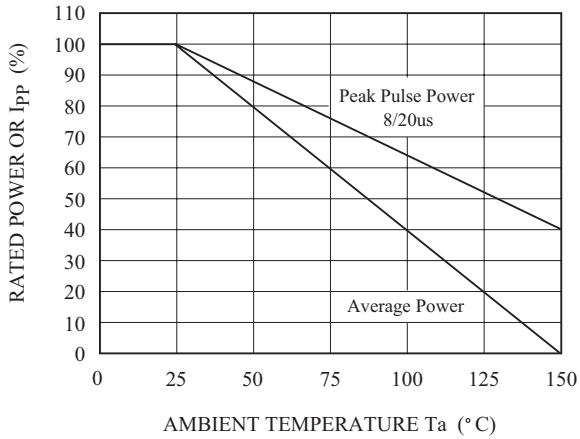
ELECTRICAL CHARACTERISTICS (Ta=25℃)

CHARACTERISTIC	SYMBOL	TEST CONDITION		MIN.	TYP.	MAX.	UNIT
Reverse Stand-Off Voltage	V_{RWM}	-		-	-	5	V
Reverse Leakage Current	I_R	V_{RWM}=5V		-	10	50	nA
Snap-back Voltage	V_{SB}	I_{SB}=100 μA, I_{SB}=50mA		5.5	-	-	V
Punch-through Voltage	V_{PT}	I_{PT}=2 μA		6	8.2	9.5	nA
Total Capacitance	C_T	V_R=0V, f=1MHz		-	6	9	pF
Clamping Voltage	V_C	I_{PP}=1A, tp=8/20 μs		-	-	8	V
		I_{PP}=6A, tp=8/20 μs		-	-	12.5	
		I_{TLP}=4A, tp=100ns		-	7	12	
		I_{TLP}=24A, tp=100ns		-	12	17	
Electrostatic Discharge	V_{ESD}	IEC61000-4-2	Air	±30	-	-	kV
			Contact	±30			

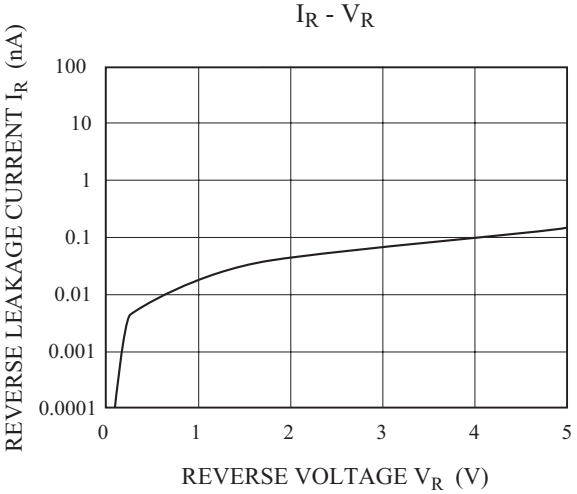
NON-REPETITIVE PEAK PULSE POWER VS. PULSE TIME



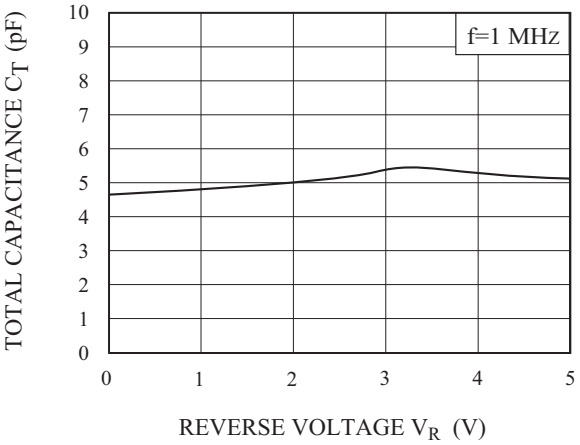
POWER DERATION CURVE



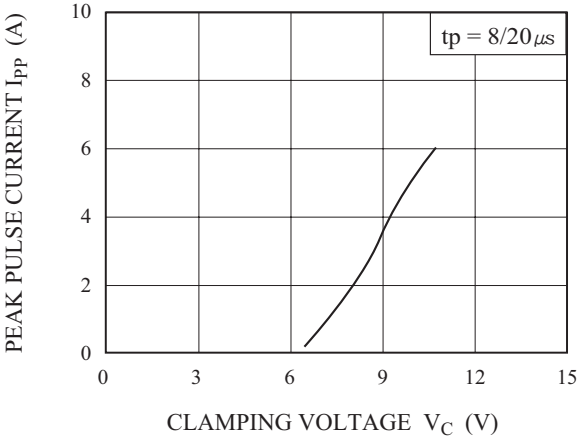
I_R - V_R



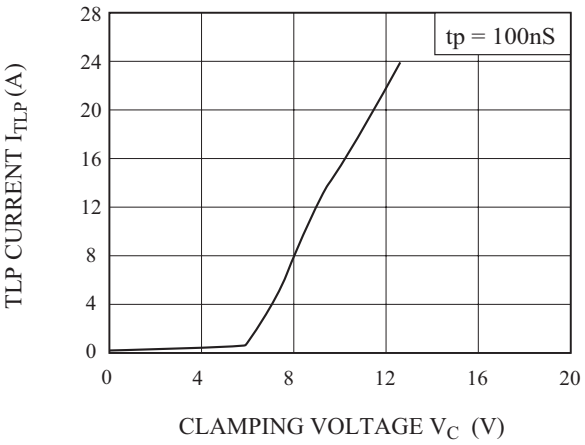
C_T - V_R



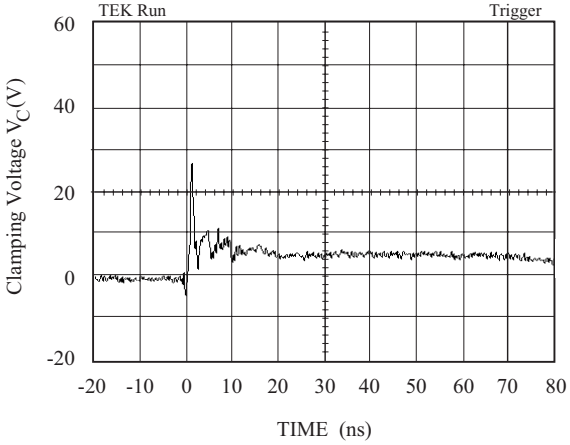
I_{PP} - V_C



I_{TLP} - V_C

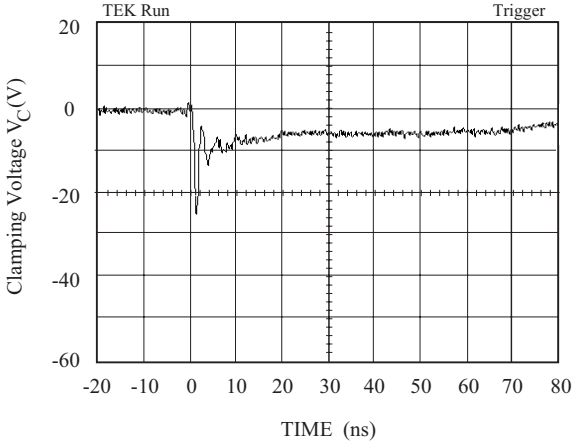


ESD Clamping
(+8 kV Contact per IEC 61000-4-2)



Note : Data is taken with a 10x attenuator

ESD Clamping
(-8 kV Contact per IEC 61000-4-2)



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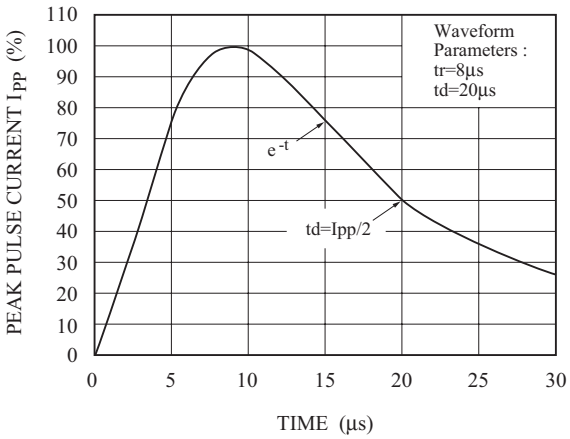
PULSE WAVEFORM



APPLICATIONS

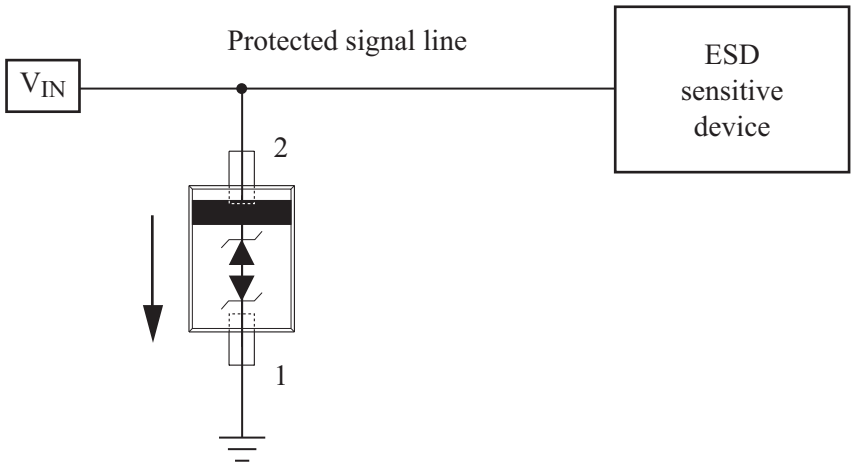
· MDDI Port

· LCD-Display, Camera

· GPS / FM Antennas

· LVDS

· Wifi Module, Bluetooth Module



Recommended pad dimension & Marking Information

Recommended pad dimension	Marking Code