

Ultra Low capacitance & Low Clamping Voltage

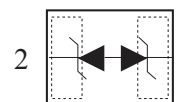
Bi-directional ESD / Transient Protection Diodes

FEATURES

- Transient protection for data lines to
 - IEC61000-4-2(ESD) : Air mode $\pm 30\text{kV}$ / Contact mode $\pm 30\text{kV}$
 - IEC61000-4-5(Surge) : $12\text{A}(t_p=8/20\mu\text{s})$
- Low capacitance $C_T = 25\text{pF}(\text{Max})$
- Bi-directional, symmetrical working voltage up to : $V_{\text{RWM}} = \pm 5\text{V}$
- Ultra small Size $1.0 \times 0.6 \times 0.4\text{mm}$
- Non Suffix : ULP-2 Package ex) PS05DBUL2-RTL/H
- Suffix U : ULP-2 Package&Qualified to AEC-Q101 ex) PS05DBUL2-RTL/HU
- Suffix R : ULP-2(4) Package ex) PS05DBUL2-RTL/HR
- Suffix UR : ULP-2(4) Package&Qualified to AEC-Q101 ex) PS05DBUL2-RTL/HUR
- Suffix P : ULP-2(5) Package ex) PS05DBUL2-RTL/HP
- Suffix UP : ULP-2(5) Package&Qualified to AEC-Q101 ex) PS05DBUL2-RTL/HUP



ULP-2 (leadless-type)



1. ANODE 2. ANODE

Pin configurations (Bi-directional)

PRODUCT DESCRIPTION

- Molding compound flammability rating : UL 94V-0
- Pb-Free, Halogen-Free, RoHs Compliant

Package dimensions (ULP-2)	Package dimensions (ULP-2(4))	Package dimensions (ULP-2(5))																																																				
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ORDERING INFORMATION

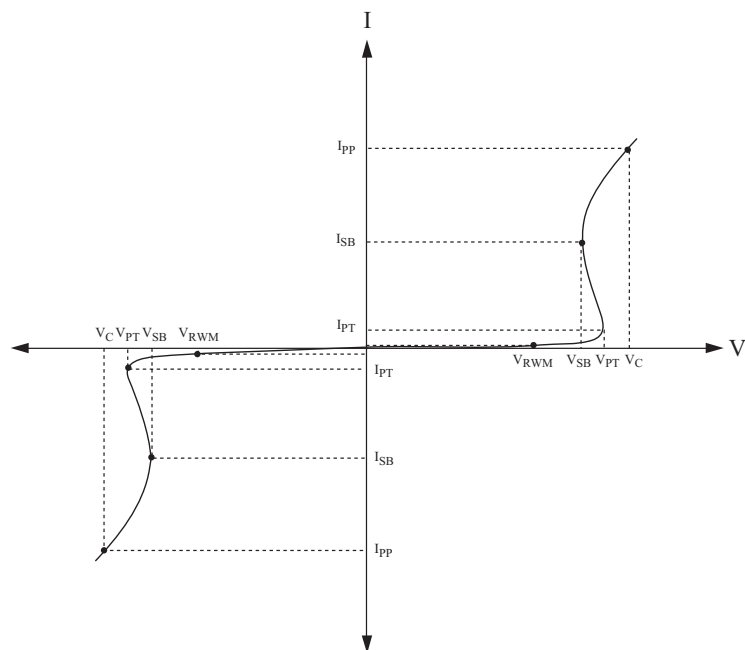
Part Number	Qty per Reel	Reel Size	Marking code
PS05DBUL2-RTL	10,000	7 inch	H

PS05DBUL2

MAXIMUM RATING (Ta=25)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Peak Pulse Power (tp=8/20 μs)	P _{PK}	200	W
Peak Pulse Current (tp=8/20 μs)	I _{PP}	12	A
Junction Temperature	T _J	150	
Storage Temperature	T _{STG}	-55 150	

DEFINITIONS OF ELECTRICAL CHARACTERISTIC SYMBOL

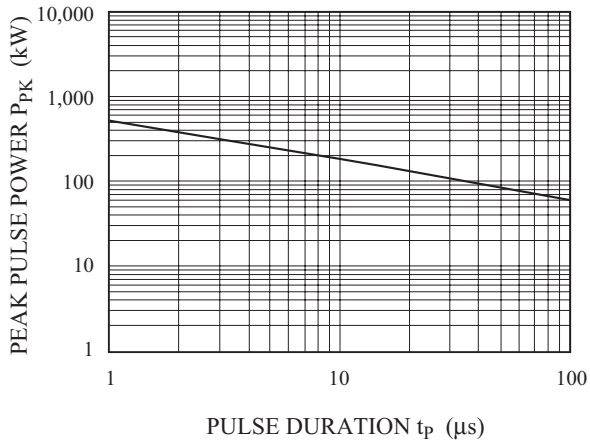


ELECTRICAL CHARACTERISTICS (Ta=25)

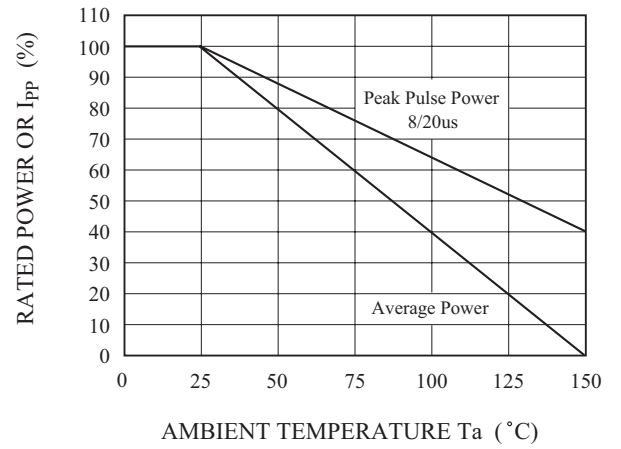
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Reverse Stand-Off Voltage	V _{RWM}	-	-	-	5	V
Punch-through Voltage	V _{PT}	I _{PT} =2 μA	6	-	-	V
Snap-back Voltage	V _{SB}	I _{SB} =100 μA, I _{SB} =50mA	5.8	-	-	V
Reverse Leakage Current	I _R	V _{RWM} =5V	-	-	0.1	μA
Total Capacitance	C _T	V _R =0V, f=1MHz	-	-	25	pF
Clamping Voltage	V _C	I _{PP} =1A, tp=8/20 μs (IEC61000-4-5)	-	7	10	V
		I _{PP} =12A, tp=8/20 μs (IEC61000-4-5)	-	12	17	
Electrostatic Discharge	V _{ESD}	IEC61000-4-2	Air	± 30	-	kV
			Contact	± 30		

PS05DBUL2

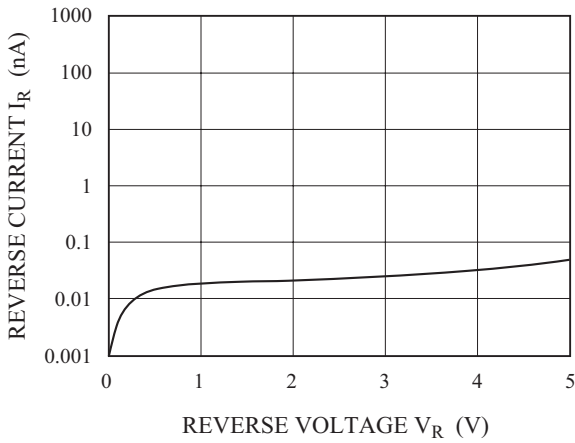
NON-REPETITIVE PEAK PULSE POWER
VS. PULSE TIME



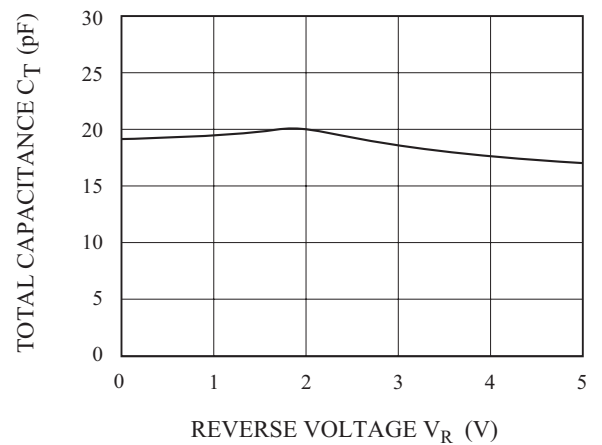
POWER DERATION CURVE



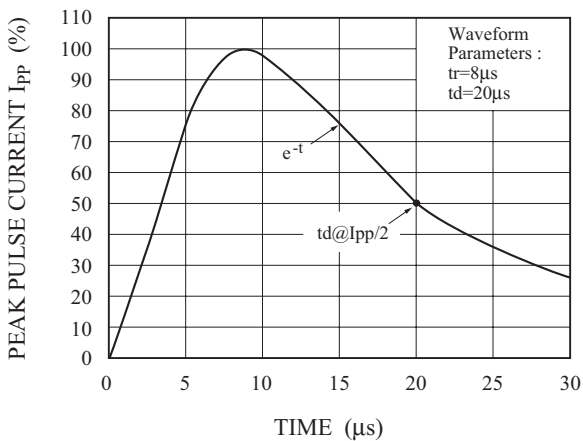
$I_R - V_R$



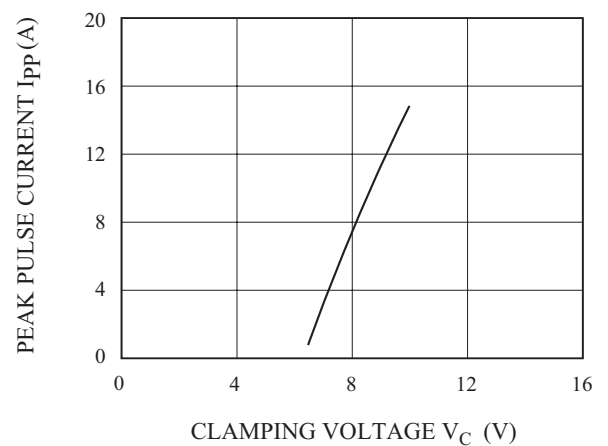
$C_T - V_R$



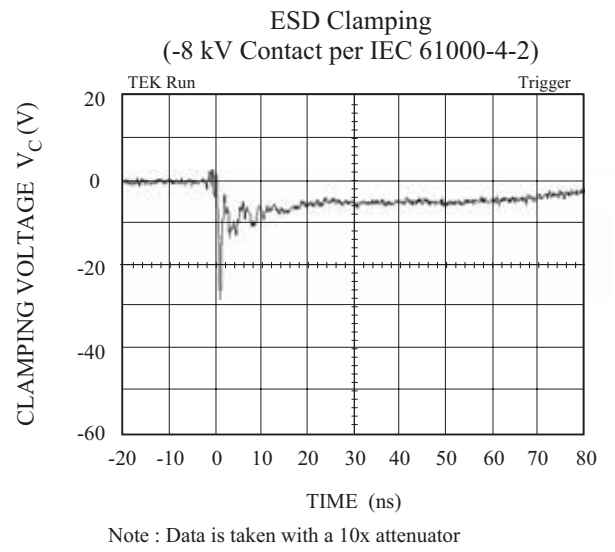
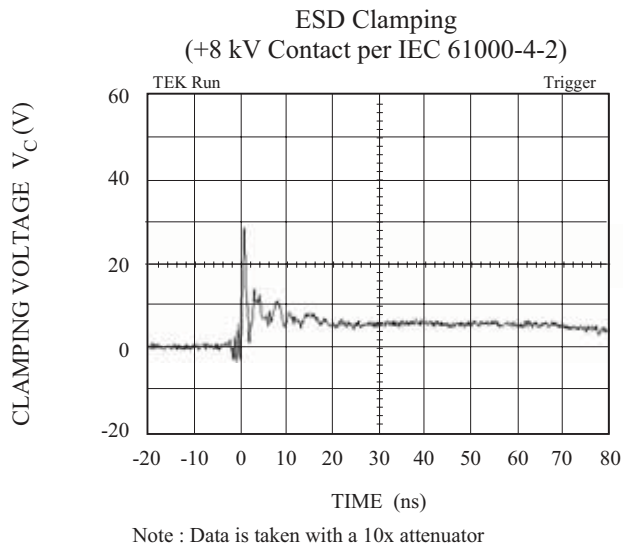
PULSE WAVEFORM



$I_{PP} - V_C$



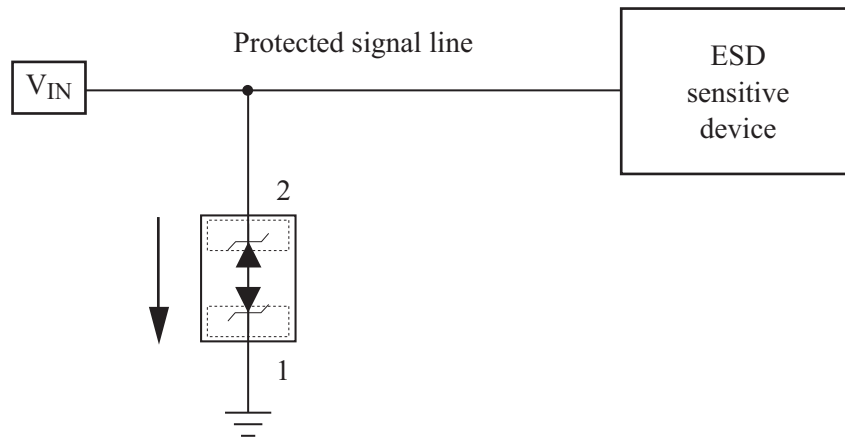
PS05DBUL2



PS05DBUL2

APPLICATIONS

- Audio and Video equipment
- Portable electronics
- Cellular handsets and accessories
- LCD-Display, Camera



Recommended pad dimension & Marking Information

Recommended pad dimension	Marking Code
1.4 0.55 0.6 0.3 0.85	H