

MSKSEMI 美森科

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

PDY0503005-MS

Product specification

Features

- 100W peak pulse power ($t_p = 8/20\mu s$)
- SC-89 package
- Protects four bidirectional lines and five unidirectional lines
- Low clamping voltage
- Low capacitance
- Working voltage: 5V
- RoHS compliant transient protection for high speed data lines to IEC61000-4-2(ESD) $\pm 25kV$ (air), $\pm 25kV$ (contact)

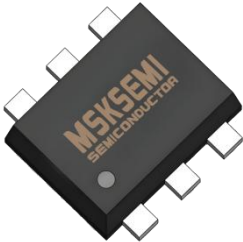
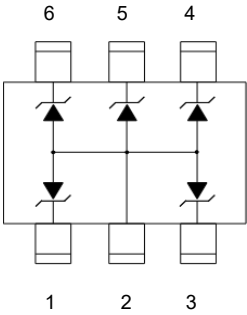

Mechanical Characteristics

- Lead finish:100% matteSn(Tin)
- Mounting position: Any
- Qualified max reflow temperature:260°C
- Device meets MSL 1 requirements
- Pure tin plating: 7 ~ 17 μm
- Pin flatness: $\leq 3mil$

Applications

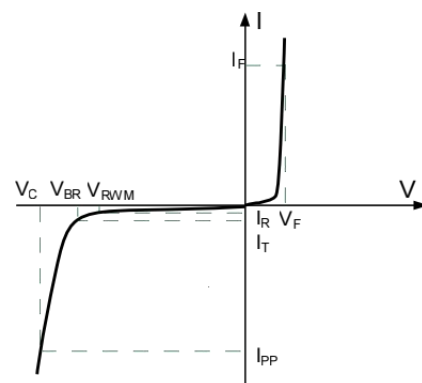
- Communication systems & cellular phones
- Printers
- Notebook and hand hold computers
- PDAs
- Video equipment

Reference News

SC-89	PIN Configuration	Marking
		

Electronics Parameter

Symbol	Parameter
V_{RWM}	Peak Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
P_{PP}	Peak Pulse Power
C_J	Junction Capacitance
I_F	Forward Current
V_F	Forward Voltage @ I_F



Electrical characteristics per line@25°C (unless otherwise specified) *NOTE1

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	$I_t = 1mA$	5.6			V
Reverse Leakage Current	I_R	$V_{RWM} = 5V T=25^{\circ}C$			1	μA
Clamping Voltage	V_C	$I_{PP} = 1A t_p = 8/20\mu S$			8.8	V
Clamping Voltage	V_C	$I_{PP}=4A t_p = 8/20\mu S$			11.5	V
Junction Capacitance	C_j	$V_R=0V f = 1MHz$		1		pF

Absolute maximum rating@25°C *NOTE1

Rating	Symbol	Value	Units
Peak Pulse Power ($t_p=8/20\mu s$)	P_{PP}	100	W
Forward Voltage(@1A, 8/20 μs)	V_F	1.5	V
Operating Temperature	T_J	-55 to +150	$^{\circ}C$
Storage Temperature	T_{STG}	-55 to +150	$^{\circ}C$

Note1: Pin 1, 3, 4, 5 or 6 to Pin 2

Typical Characteristics

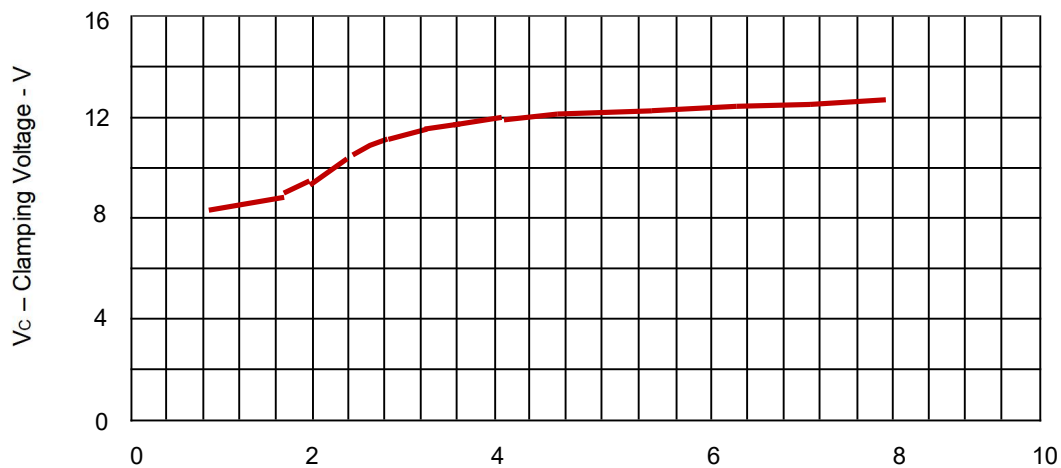


Fig.1 Typical Clamping Voltage VS Peak Pulse Current for PDY0503005-MS

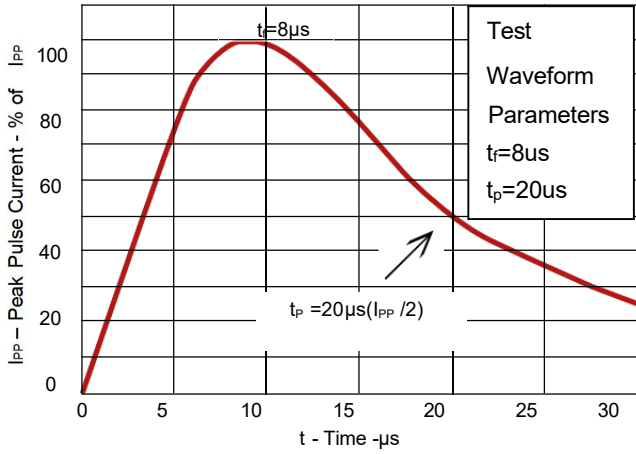


Fig 2.Pulse Waveform

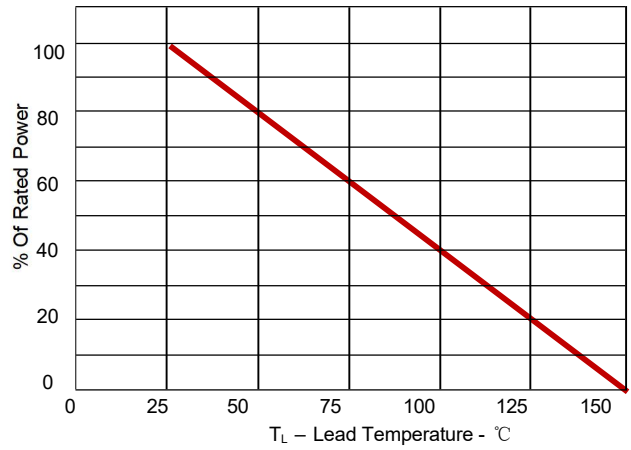
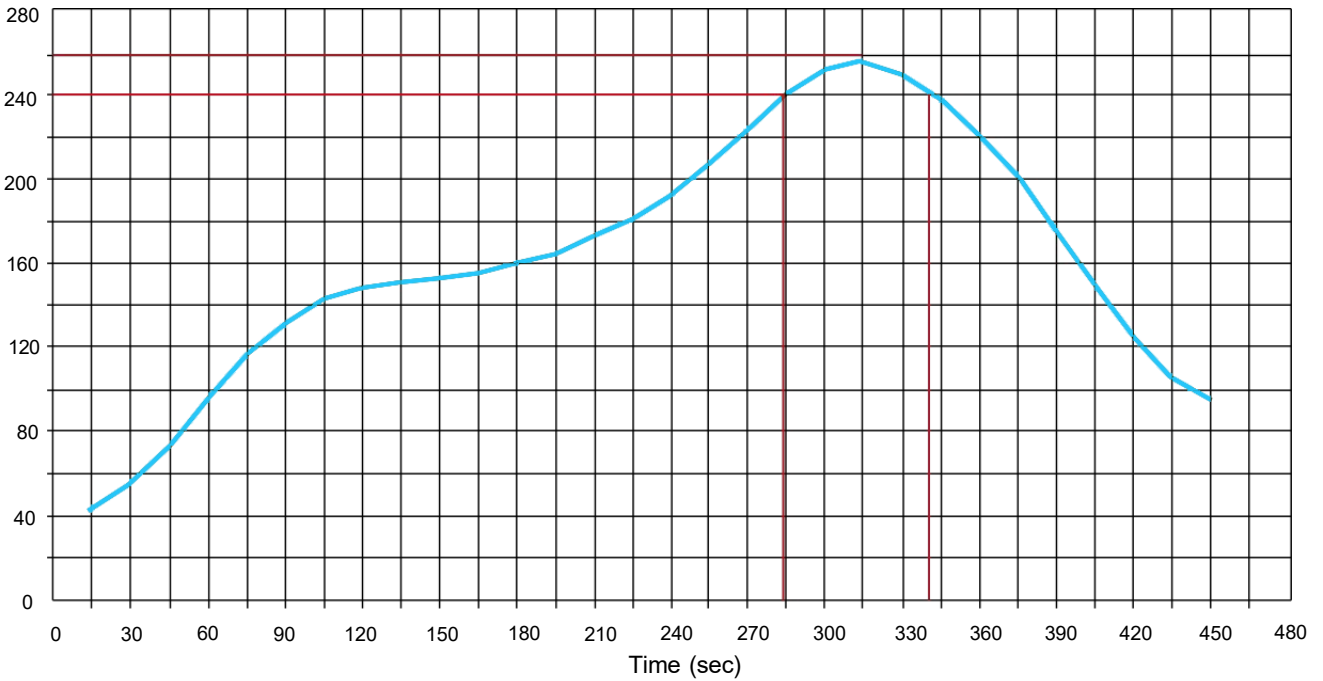


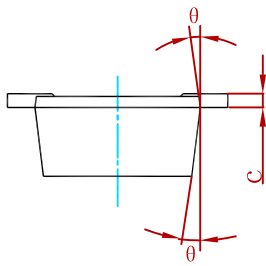
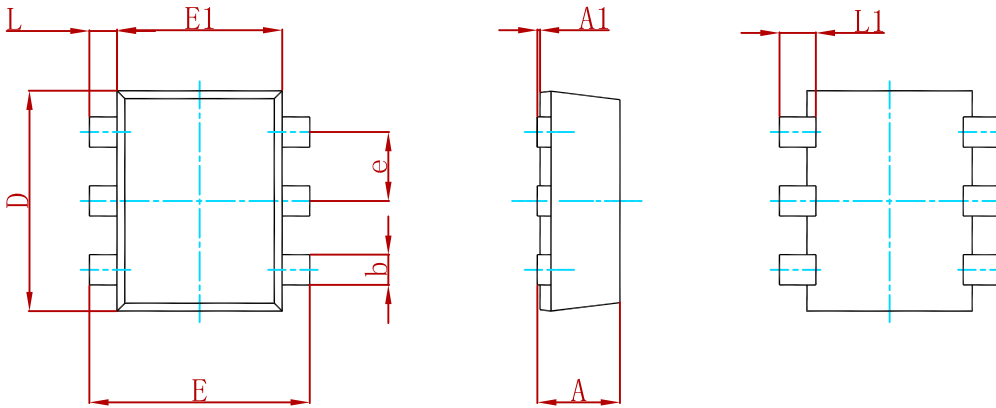
Fig 3.Power Derating Curve

Solder Reflow Recommendation

Peak Temp=257°C, Ramp Rate=0.802deg. °C/sec

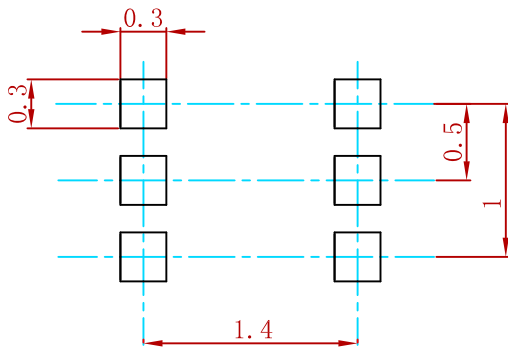


PACKAGE MECHANICAL DATA



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.525	0.600	0.021	0.024
A1	0.000	0.050	0.000	0.002
e	0.450	0.550	0.018	0.022
c	0.090	0.160	0.004	0.006
D	1.500	1.700	0.059	0.067
b	0.170	0.270	0.007	0.011
E1	1.100	1.300	0.043	0.051
E	1.500	1.700	0.059	0.067
L	0.100	0.300	0.004	0.012
L1	0.200	0.400	0.008	0.016
θ	7 °REF.		7 °REF.	

Suggested Pad Layout



Note:
 1. Controlling dimension: in millimeters.
 2. General tolerance: $\pm 0.05\text{mm}$.
 3. The pad layout is for reference purposes only.

Order information

Orderable Device	Package	Packing Option
PDY0503005-MS	SC-89	3000PCS

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