



DW05MS-AT-S ESD Protection Diode

Feature

- Uni-directional ESD protection of four lines
- 150Watts peak pulse power ($t_p = 8/20\mu s$)
- Working voltage: 5V
- Junction capacitance: 90pF(Typ)
- Low leakage current
- Low clamping voltage
- AEC-Q101 qualified
- IEC 61000-4-2 $\pm 30kV$ contact $\pm 30kV$ air
- IEC 61000-4-5 (Lightning) 12A ($8/20\mu s$)

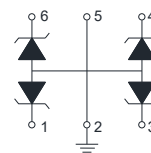
Application

- Computers
- Communication systems
- Wireline and wireless telephone sets
- Printers
- Cellular phones handsets and accessories
- Set top boxes

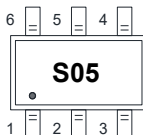
Mechanical Data

- Package: SOT-23-6L
- Molding compound flammability rating: UL 94V-0
- RoHS/WEEE compliant

Schematic & PIN Configuration



Ordering Information

Part Number	Package	Marking	QTY per Reel	Reel Size
DW05MS-AT-S	SOT-23-6L		3000 pcs	7 inches



Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Min.	Max.	Unit
Peak pulse power ($t_p=8/20\mu\text{s}$)	P_{PK}	-	150	W
Peak pulse current ($t_p=8/20\mu\text{s}$)	I_{PP}		12	A
ESD (IEC61000-4-2 air discharge)	V_{ESD}	-	± 30	kV
ESD (IEC61000-4-2 contact discharge)	V_{ESD}	-	± 30	kV
Junction temperature	T_J	-	150	$^{\circ}\text{C}$
Operating temperature	T_{OP}	-40	125	$^{\circ}\text{C}$
Storage temperature	T_{STG}	-55	150	$^{\circ}\text{C}$
Lead temperature	T_L	-	260	$^{\circ}\text{C}$

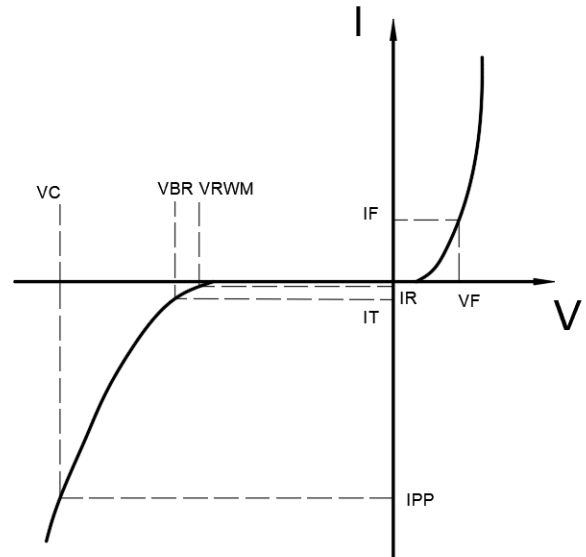
Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1\text{mA}$	6			V
Reverse Leakage Current	I_R	$V_{RWM}=5\text{V}$			1	μA
Clamping Voltage	V_C	$I_{PP}=1\text{A}$; $t_p=8/20\mu\text{s}$		7.5	10	V
Clamping Voltage	V_C	$I_{PP}=12\text{A}$; $t_p=8/20\mu\text{s}$		10	13	V
Junction Capacitance	C_J	I/O to GND; $V_R=0\text{V}$; $f=1\text{MHz}$		90	120	pF

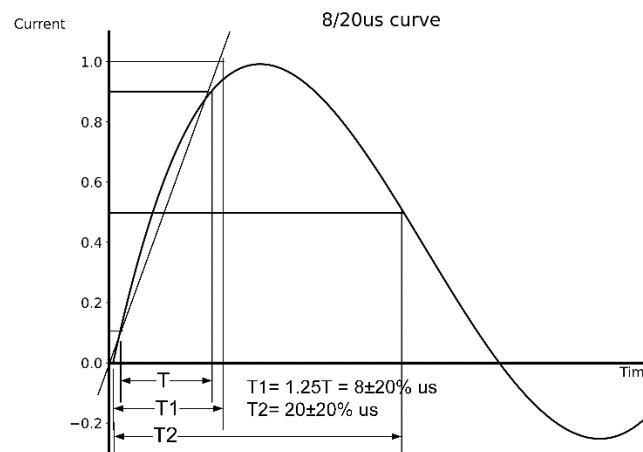


Electrical Parameters

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}
I_F	Forward Current
V_F	Forward Voltage @ I_F

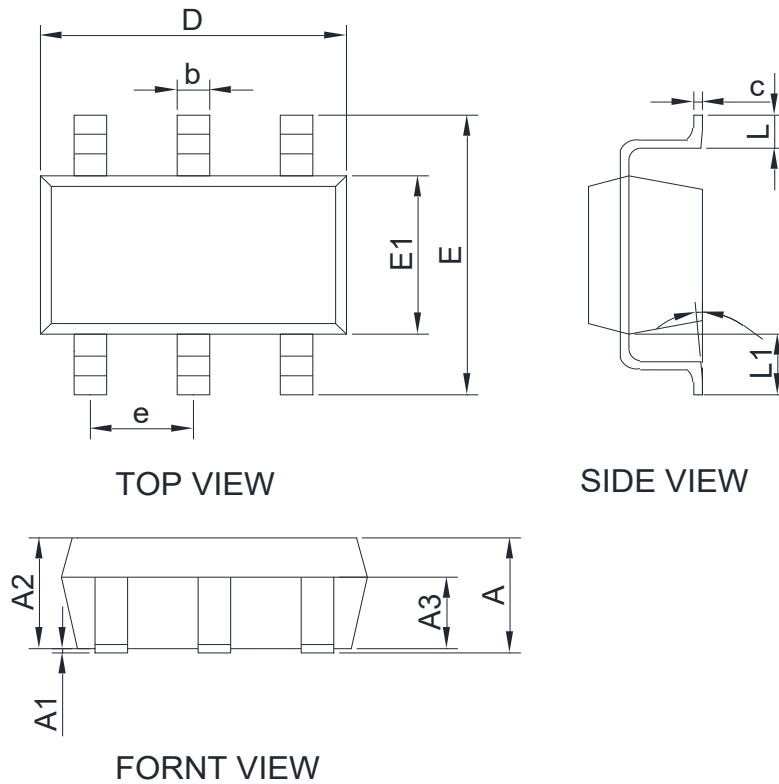


Typical Characteristic





SOT-23-6L Outline Drawing

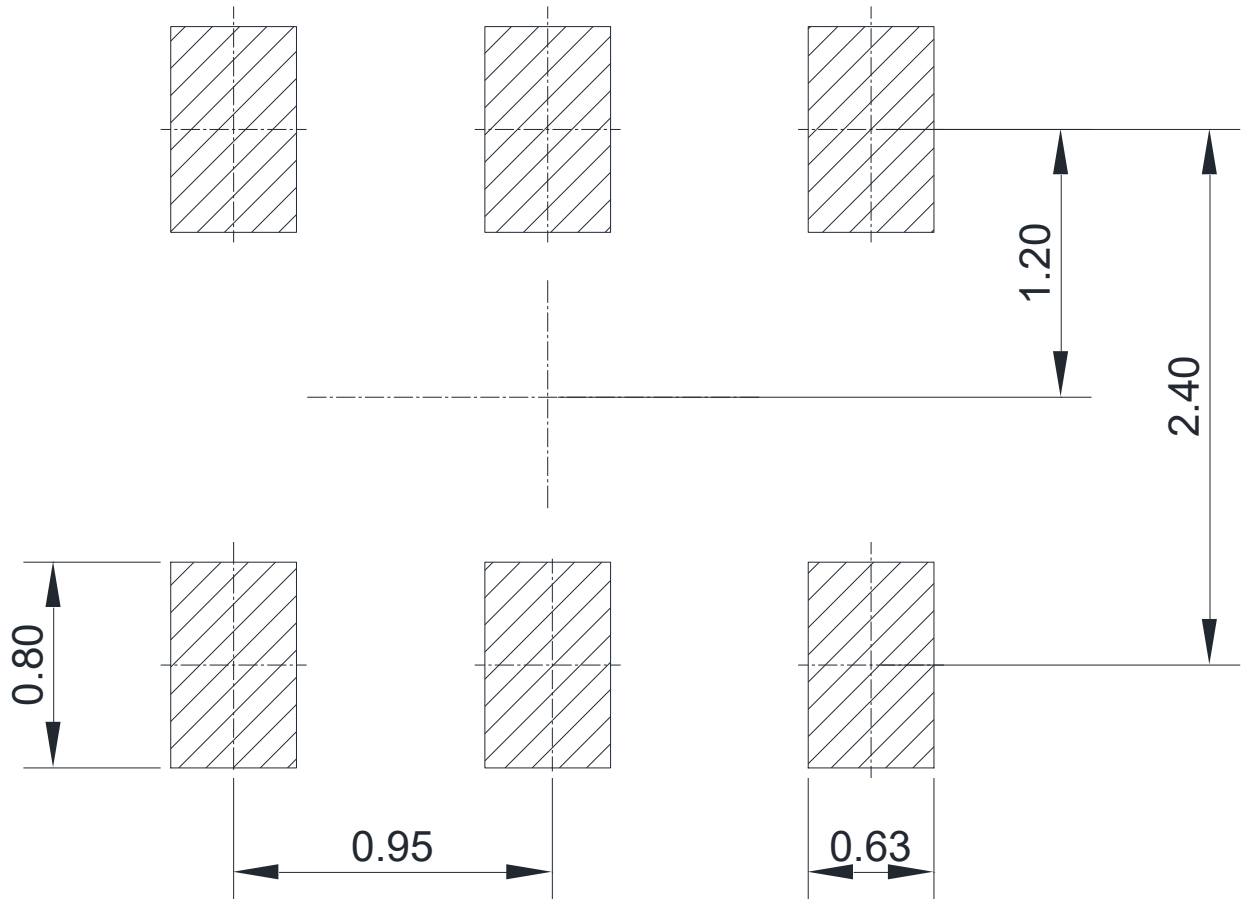


Unit: mm

Symbol		A	A1	A2	A3	b	c	D
Spec	Min	1.000	0.000	1.000	0.500	0.300	0.100	2.700
	Max	1.300	0.110	1.200	0.800	0.500	0.250	3.100
Symbol		E	E1	e	L	L1	θ	
Spec	Min	2.600	1.500	0.850	0.300	0.550	0°	
	Max	3.000	1.800	1.050	0.600	0.700	8°	



Recommended Soldering Footprint



DIMENSIONS: MILLIMETERS