DW05MS-S ESD Protection Diode

Feature

- Uni-directional ESD protection of foue lines
- 150Watts peak pulse power (tp = 8/20μs)
- Working voltage: 5V
- Junction capacitance: 90pF(Typ)
- Low leakage current
- Low clamping voltage
- IEC 61000-4-2 ±30kV contact ±30kV air
- IEC 61000-4-5 (Lightning) 12A (8/20μs)

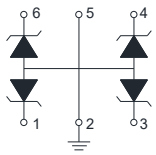
Application

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

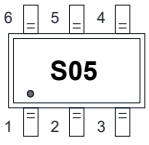
Mechanical Data

- 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-S	SOT-23-6L		3000 pcs	7 inches

Absolute Maximum Ratings (T_A=25°C unless otherwise specified)

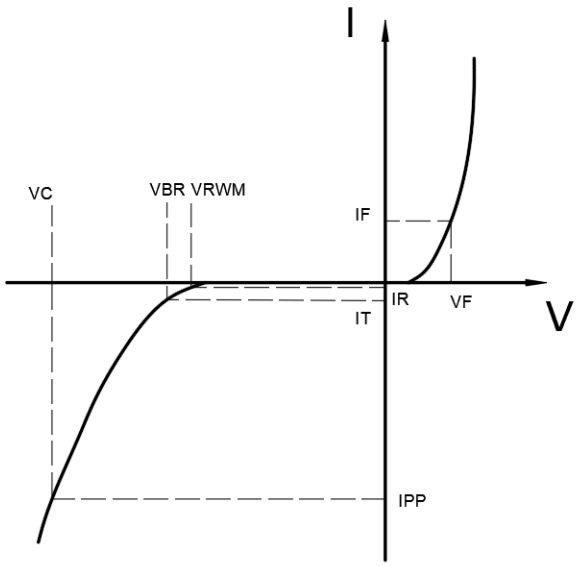
Parameter	Symbol	Min.	Max.	Unit
Peak pulse power (tp=8/20us)	P_{PK}	-	150	W
Peak pulse current (tp=8/20us)	I_{PP}		12	A
ESD (IEC61000-4-2 air discharge)	V_{ESD}	-	±30	kV
ESD (IEC61000-4-2 contact discharge)	V_{ESD}	-	±30	kV
Junction temperature	T_J	-	150	℃
Operating temperature	T_{OP}	-40	125	℃
Storage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

Electrical Characteristics (T_A=25°C unless otherwise specified)

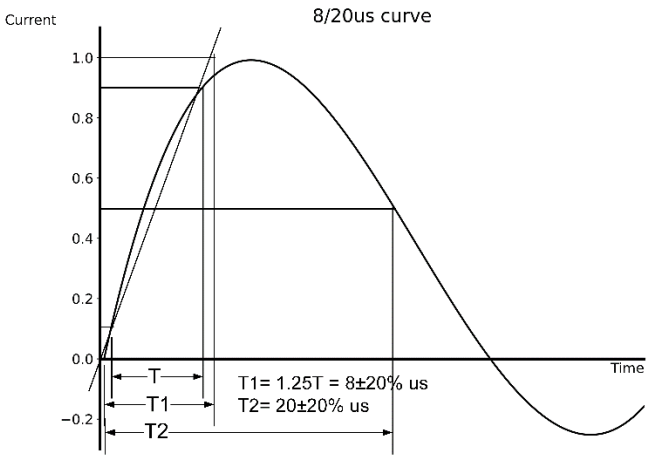
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	I_T=1mA	6			V
Reverse Leakage Current	I_R	V_{RWM}=5V			1	uA
Clamping Voltage	V_C	I_{PP}=1A; tp=8/20us		7.5	10	V
Clamping Voltage	V_C	I_{PP}=12A; tp=8/20us		10	13	V
Junction Capacitance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

Electrical Parameters

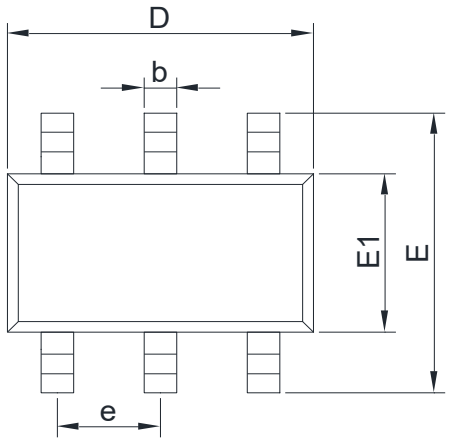
Symbol	Parameter
V_{RWM}	Peak Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
I_F	Forward Current
V_F	Forward Voltage @ IF



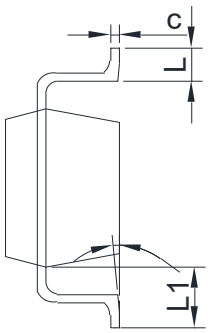
Typical Characteristic



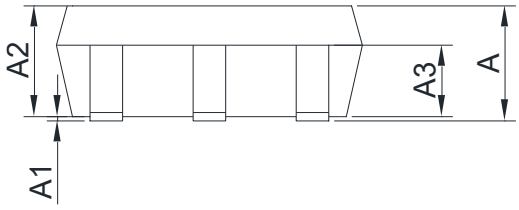
SOT-23-6L Outline Drawing



TOP VIEW



SIDE VIEW

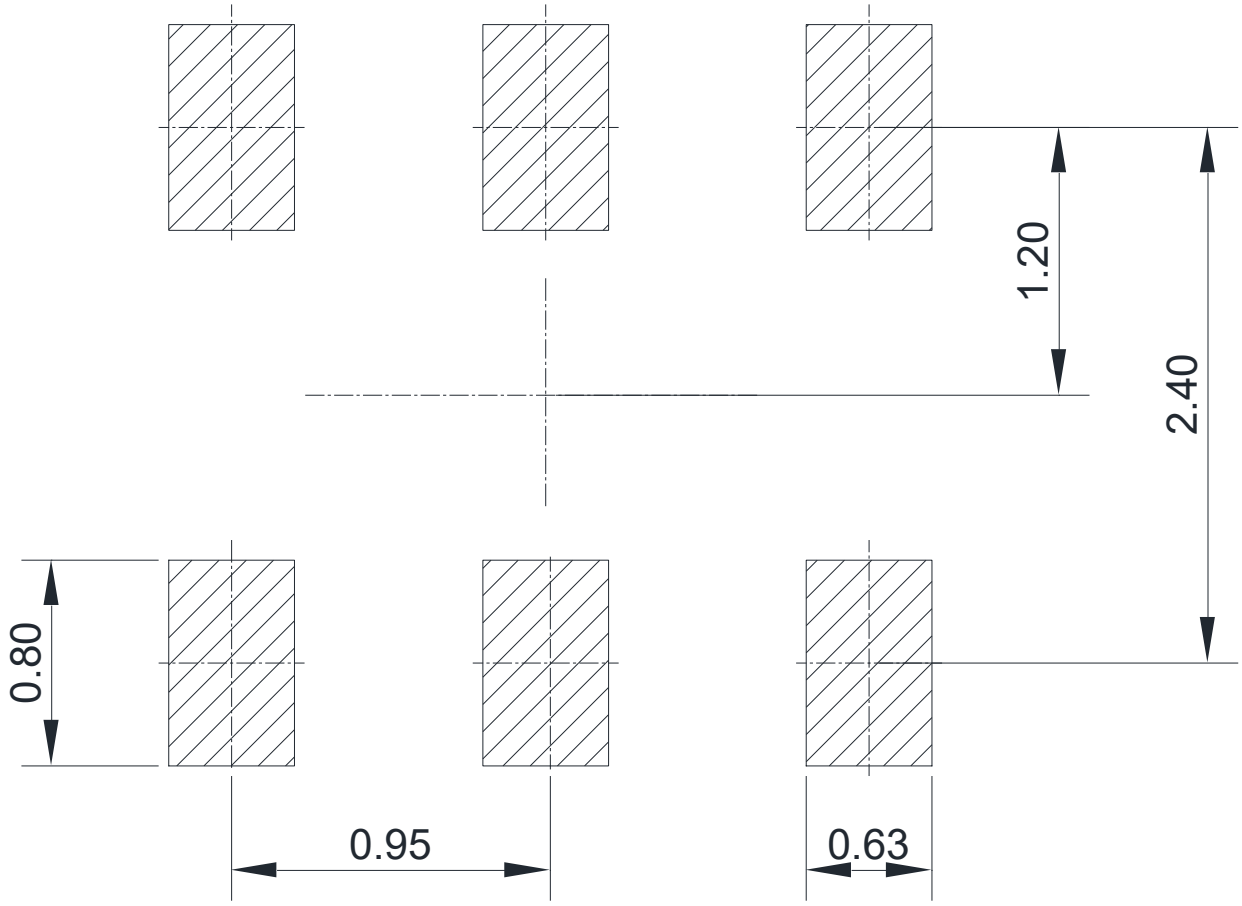


FORNT VIEW

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