

Features

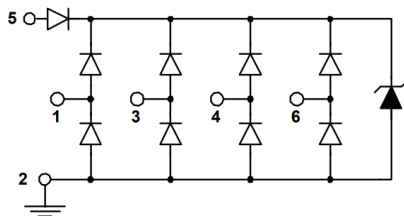
- * Ultra low leakage: nA level
- * Low clamping voltage
- * RoHS Compliant
- * REACH & SVHC Compliant
- * Halogen Compliant
- * SOT-23-6L Package



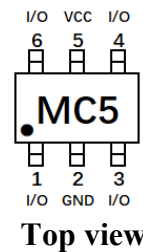
Ordering Information

Part Number	Packaging	Reel Size
E05T2-41RU	3000/Tape & Reel	7 inch

Circuit Diagram

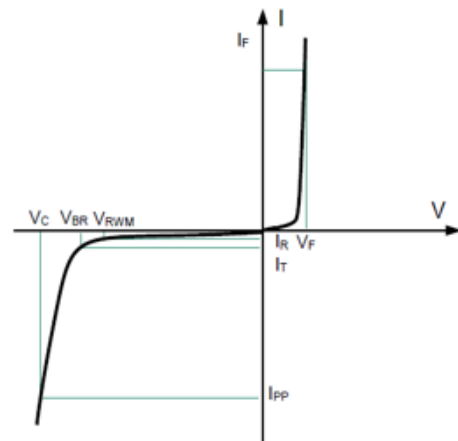


Marking Diagram



Portion 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}



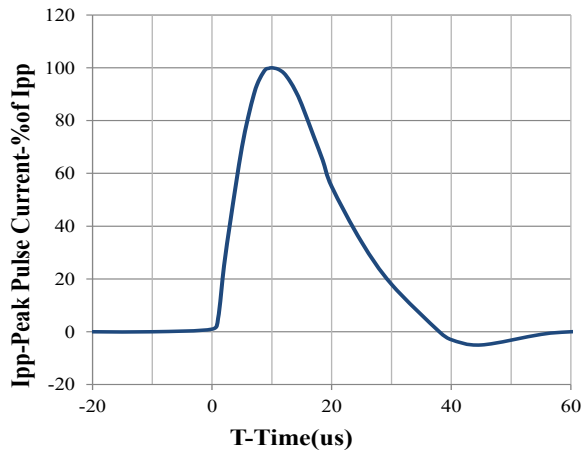
Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs , I/O-GND)	Ppk	56	W
Peak Pulse Current (8/20 μs , I/O-GND)	I_{PP}	4	A
ESD per IEC 61000-4-2 (Air)	V_{ESD}	± 20	kV
ESD per IEC 61000-4-2 (Contact)		± 15	
Operating Temperature Range	T_J	-40 to +125	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^{\circ}\text{C}$

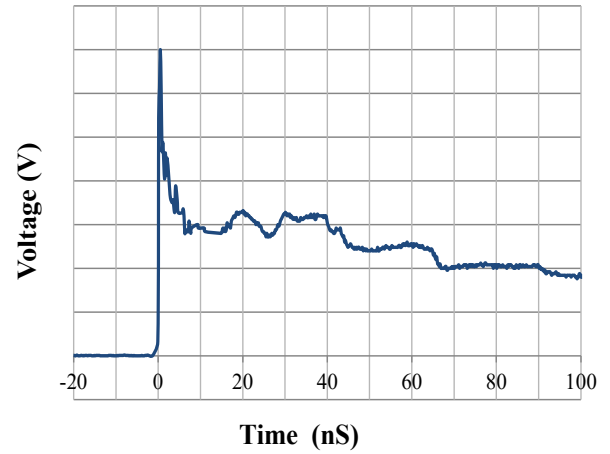
Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				5	V
Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$, I/O-GND	6	7.3	8.5	V
Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$, I/O-I/O	7	8.3	9.5	V
Reverse Leakage Current	I_R	$V_{RWM} = 5\text{V}$		<10	100	nA
Clamping Voltage	V_C	$I_{PP} = 1\text{A}$ (8 / 20 μs pulse), I/O-GND		8	12	V
Clamping Voltage	V_C	$I_{PP} = 4\text{A}$ (8 / 20 μs pulse), I/O-GND		11	14	V
Clamping Voltage	V_C	$I_{PP} = 1\text{A}$ (8 / 20 μs pulse), I/O-I/O		10	14	V
Clamping Voltage	V_C	$I_{PP} = 4\text{A}$ (8 / 20 μs pulse), I/O-I/O		19	23	V
Junction Capacitance	C_J	$V_R = 0\text{V}$, $f = 1\text{MHz}$, I/O-GND		0.6	0.8	pF
Junction Capacitance	C_J	$V_R = 0\text{V}$, $f = 1\text{MHz}$, I/O-I/O		0.3	0.4	pF

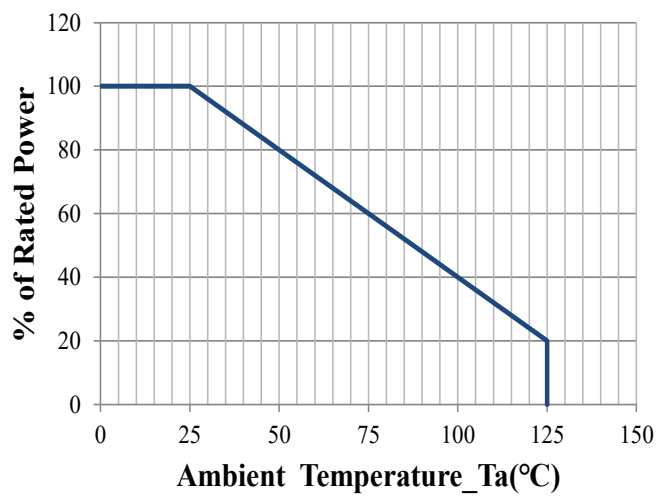
Typical Performance Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise Specified)



8 / 20us Pulse Waveform

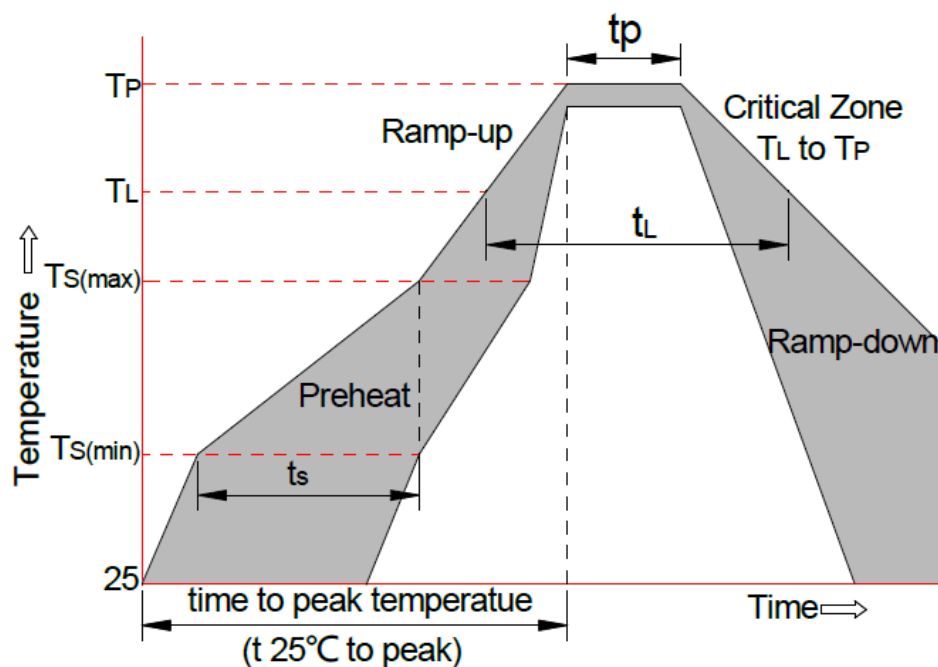


IEC61000-4-2 Pulse Waveform



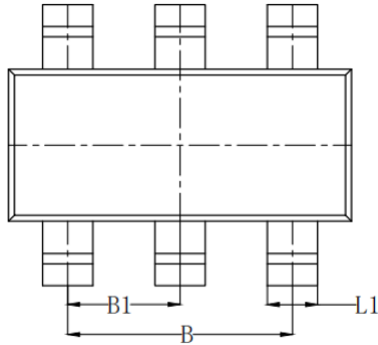
Power Derating Curve

Soldering Parameters

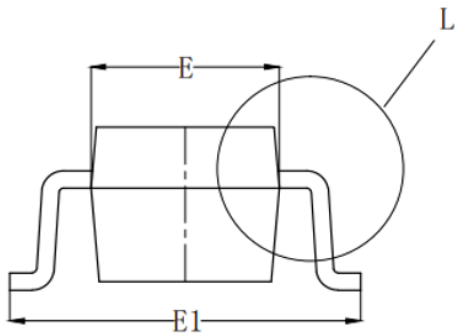


Reflow Condition		Pb-Free Assembly
Pre-heat	-Temperature Min ($T_{S(min)}$)	+150°C
	-Temperature Max ($T_{S(max)}$)	+200°C
	-Time (Min to Max) (t_s)	60-180 secs
Average ramp up rate(Liquid us Temp (T_L) to peak)		3°C/sec. Max
$T_{S(max)}$ to T_L -Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature (T_L) (Liquid us)	+217°C
	-Temperature (t_L)	60-150 secs
Peak Temp (T_p)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6 °C/secs. Max
xTime 25°C to Peak Temp (T_P)		8 min. Max
Do not exceed		+260°C

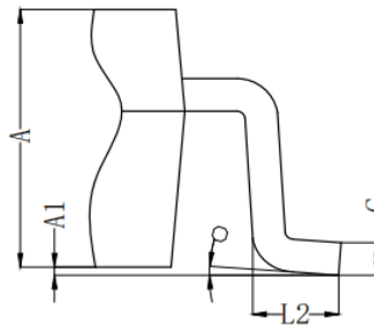
SOT-23-6L Package Outline Drawing



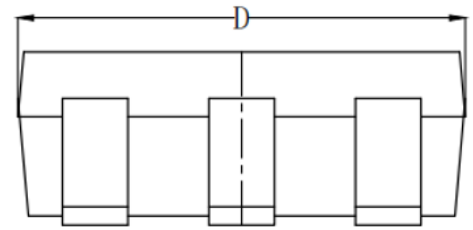
SYM	DIMENSIONS					
	MILLIMETERS			INCHES		
	Min	Typ	Max	Min	Typ	Max
A	1.05	1.10	1.15	0.0413	0.0433	0.0453
A1	0.00	0.05	0.10	0.0000	0.0020	0.0039
B	1.90 TYP			0.0748 TYP		
B1	0.95 TYP			0.0374 TYP		
C	0.10	0.15	0.20	0.0039	0.0059	0.0079
D	2.82	2.92	3.02	0.1110	0.1150	0.1189
E	1.50	1.60	1.70	0.0591	0.0630	0.0669
E1	2.65	2.80	2.95	0.1043	0.1102	0.1161
L1	0.30	0.40	0.50	0.0118	0.0157	0.0197
L2	0.30	0.45	0.60	0.0118	0.0177	0.0236
Ø	0°	4°	8°	0°	4°	8°



SIDE VIEW

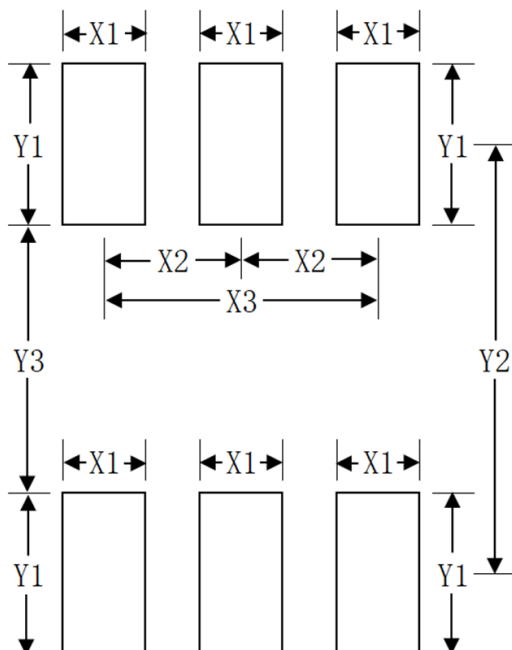


SIDE VIEW



SIDE VIEW

Suggested Land Pattern



SYM	DIMENSIONS	
	MILLIMETER	INCHES
X1	0.60	0.024
X2	0.95	0.037
X3	1.90	0.075
Y1	1.00	0.039
Y2	2.40	0.094
Y3	1.40	0.055