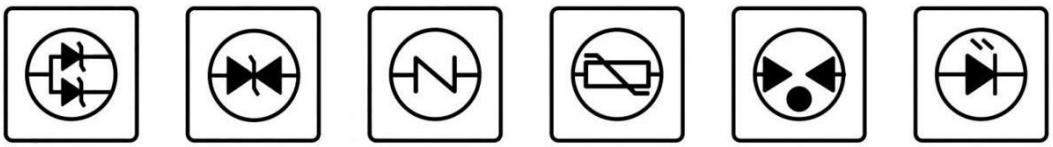
MSKSEMI 美森科
SEMICONDUCTOR



UET14A05L03-MS

Product specification

FEATURES

- Ultra low leakage: nA level
- Operating voltage: 5V
- Low clamping voltage
- Complies with following standards:
- – IEC 61000-4-2 (ESD) immunity test Air
  discharge: ± 15kV
- Contact discharge: ±8kV
- – IEC61000-4-4 (EFT) 40A (5/50ns)
- – IEC61000-4-5 (Lightning) 3A
  (8/20μs) RoHS Compliant

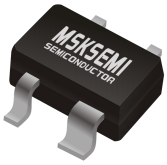
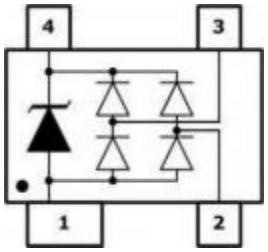
MACHANICAL DATA

- SOT-143 package
- Flammability Rating: UL 94V-0
- Packaging: Tape and Reel
- High temperature soldering guaranteed:
  260℃/10s
- Reel size: 7 inch

APPLICATIONS

- USB 2.0 power and data line
- Set-top box and digital TV
- Digitalvideointerface (DVI)
- Notebook Computers
- SIM Ports
- 10/ 100 Ethernet

Reference News

PACKAGE OUTLINE	PIN CONFIGURATION	Marking
 SOT-143		R05

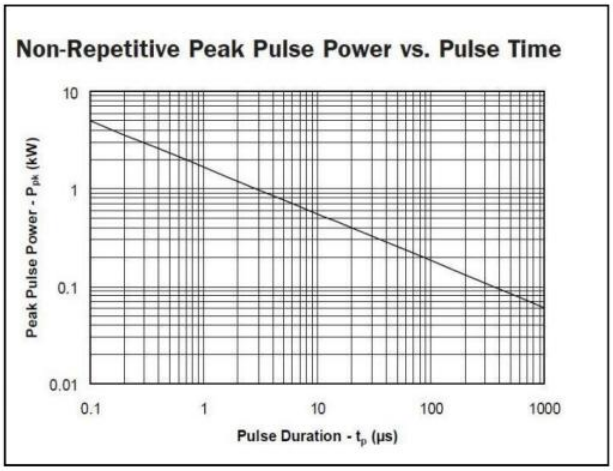
ABSOLUTE MAXIMUM RATING

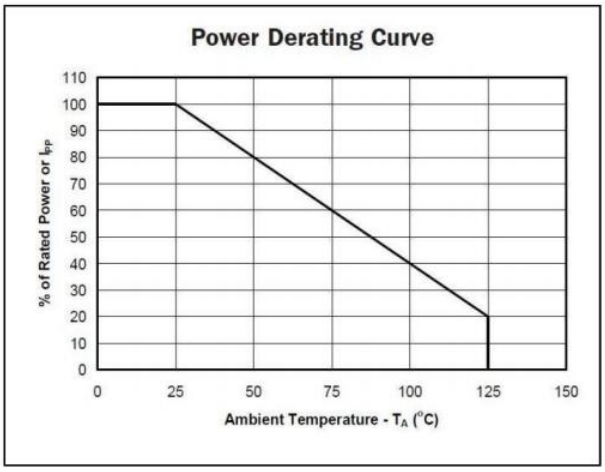
Symbol	Parameter	Value	Units
Ppp	Peak Pulse Power (8/20μs)	150	W
V_{ESD}	ESD per IEC 61000−4−2 (Air)	±15	Kv
V_{ESD}	ESD per IEC 61000−4−2 (Contact)	±8	Kv
T_J	Operating Temperature Range	-55 to + 125	℃
T_{STJ}	Storage Temperature Range	-55 to + 150	℃

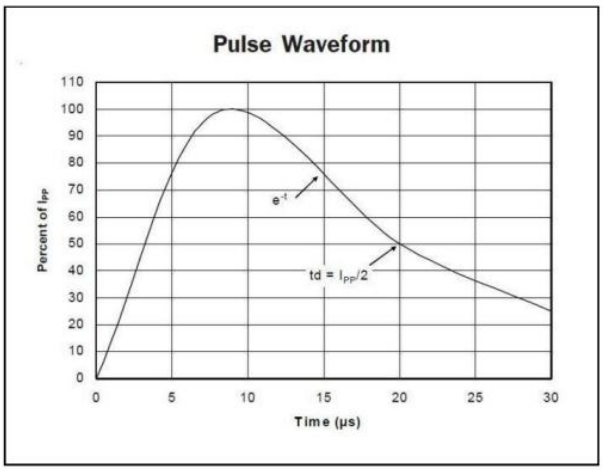
ELECTRICAL CHARACTERISTICS (Tamb=25℃)

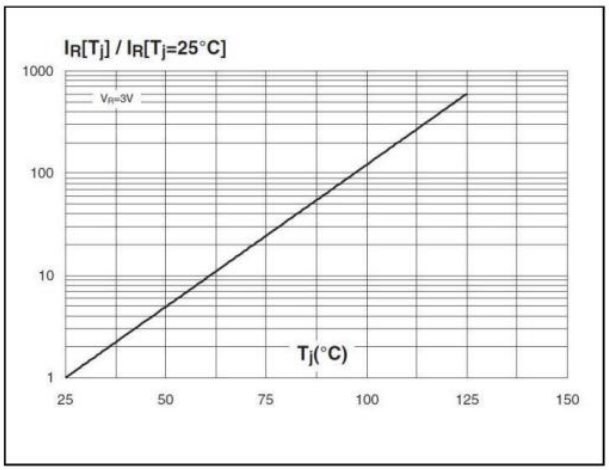
Symbol	Parameter	Test Condition	Min	Typ	Max	Units
VRWM	Reverse Working Voltage				5.0	V
VBR	Reverse Breakdown Voltage	IT = 1mA	6.0			V
IR	Reverse Leakage Current	VRWM = 5V			100	nA
VC	Clamping Voltage	IPP = 1A, t_p = 8/20μs			9.8	V
		IPP = 5 A, t_p = 8/20μs			15	V
CJ	Junction Capacitance	VR = 0V, f = 1MHz		1.2		pF

ELECTRICAL CHARACTERISTICS CURVE



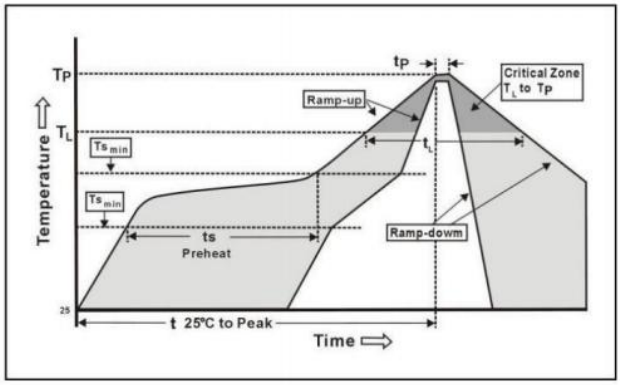




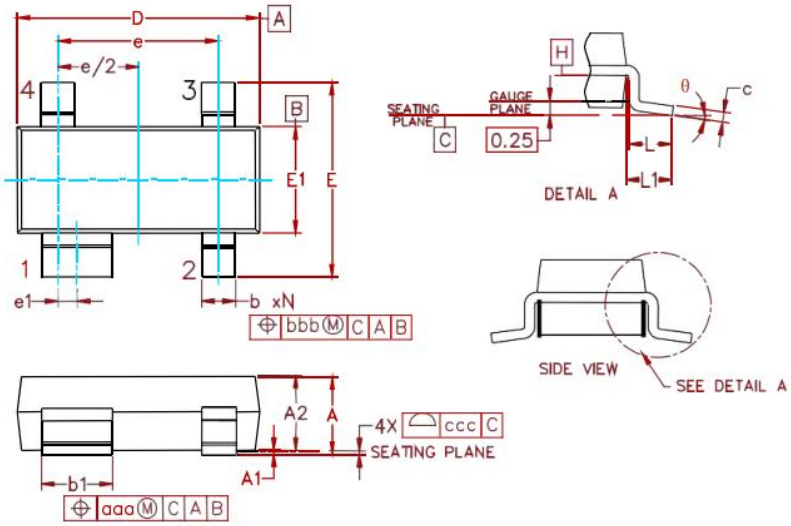


Soldering Parameters

Reflow Condition		Fb – 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 (Liquidus) Temp (T_L) to peak		3°C/second Max
$T_{S(Max)}$ to T_L - Ramp-up Rate		3°C/second Max
Reflow	-Temperature (T_L) (Liquidus)	217°C
	-Temperature (t_L)	60 – 150 seconds
Peak Temperature (T_p)		$250^{+0/-5}$ °C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-dowm Rate		6°C/second Max
Time 25°C to peak Temperature (T_p)		8 minutes Max.
Do not exceed		260°C

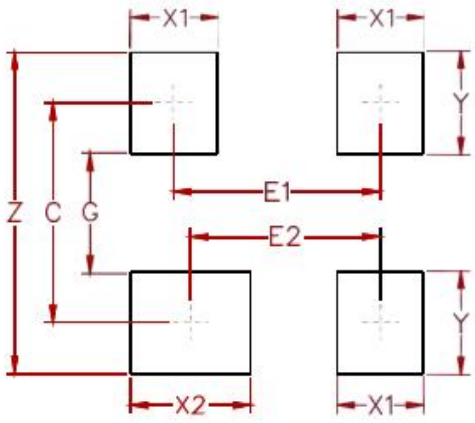


PACKAGE MECHANICAL DATA



Symbol	Inches			Millimeters		
	Min.	Nom.	Max.	Min.	Nom.	Max.
A	0.031	-	0.048	0.80	-	1.22
A1	0.000	-	0.008	0.013	-	0.15
A2	0.020	0.035	0.042	0.75	0.90	1.07
b	0.011	-	0.020	0.30	-	0.51
b1	0.029	-	0.037	0.76	-	0.94
c	0.003	-	0.008	0.08	-	0.20
D	0.110	0.114	0.120	2.80	2.90	3.04
E	0.082	0.093	0.104	2.10	2.37	2.64
E1	0.047	0.051	0.055	1.20	1.30	1.40
e	0.075			1.92 BSC		
e1	0.008			0.20 BSC		
L	0.015	0.020	0.024	0.40	0.50	0.60
L1	(0.021)			(0.54)		
N	4			4		
θ	0°	-	8°	0°	-	8°
aaa	0.006			0.15		
bbb	0.008			0.20		
ccc	0.004			0.10		

Suggested Pad Layout



REEL SPECIFICATION

P/N	PKG	QTY
UET14A05L03-MS	SOT-143	3000

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