

# MSKSEMI 美森科

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

## RS2A THRU RS2M

Product specification

**VOLTAGE RANGE:** 50 to 1000 Volts

**CURRENT:** 2.0 Ampere

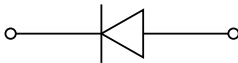
**FEATURES**

- Ideal for surface mount applications
- Easy pick and place
- Built-in strain relief
- Fast switching speed

**MECHANICAL DATA**

- Case: Molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Metallurgically bonded construction
- Polarity: Color band denotes cathode end
- Mounting position: Any
- Weight: 0.063 gram

**REFERENCE NEWS**



**Marking**

RS2A	RS2B	RS2D	RS2G	RS2J	RS2K	RS2M

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Rating 25°C ambient temperature unless otherwise specified.  
Single phase half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

TYPE NUMBER	RS2A	RS2B	RS2D	RS2G	RS2J	RS2K	RS2M	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current	2.0							A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	60							A
Maximum Instantaneous Forward Voltage at 2.0A	1.3							V
Maximum DC Reverse Current Ta=25°C at Rated DC Blocking Voltage Ta=125°C	5.0 300							µA µA
Maximum Reverse Recovery Time (Note 1)	150				250	500		nS
Typical Junction Capacitance (Note 2)	50							pF
Operating and Storage Temperature Range T <sub>J</sub> , T <sub>STG</sub>	-65 — +150							°C

**NOTES:**

1. Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

## RATING AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

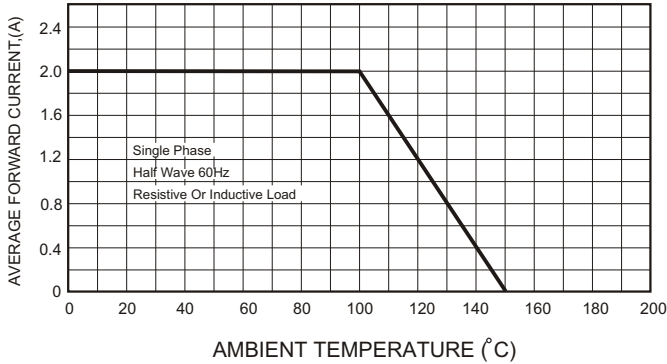


FIG.2-TYPICAL FORWARD CHARACTERISTICS

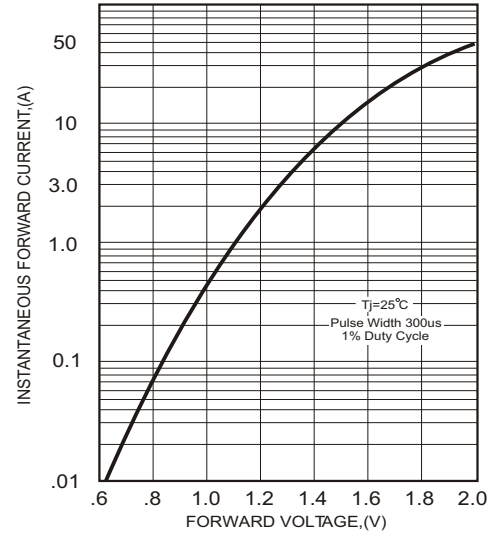
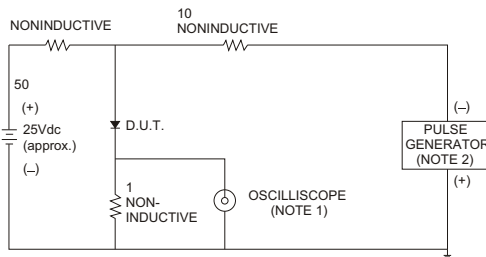


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm, 22pF.  
2. Rise Time= 10ns max., Source Impedance= 50 ohms.

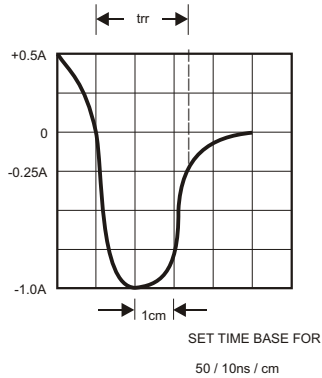


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

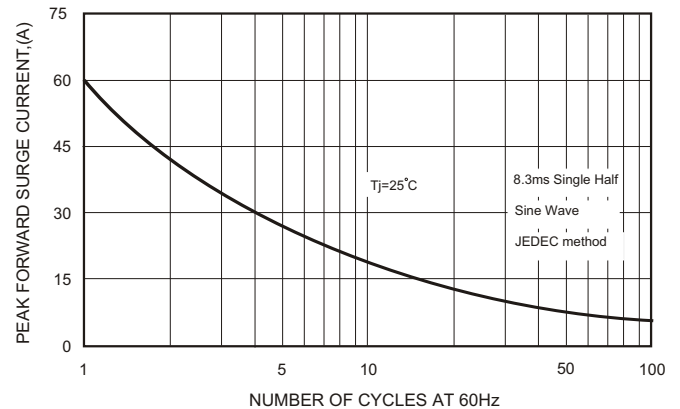


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

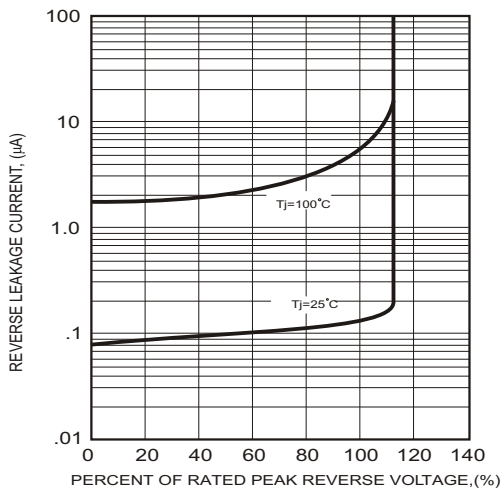
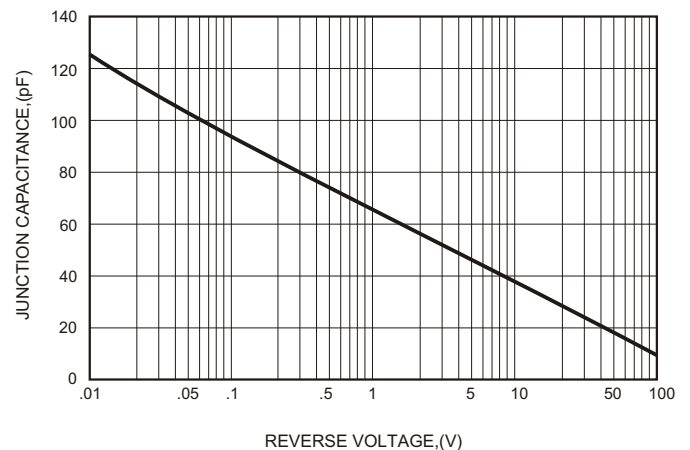
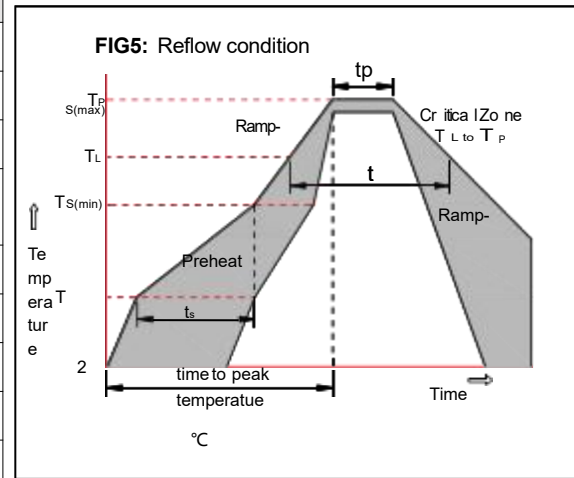


FIG.6-TYPICAL JUNCTION CAPACITANCE

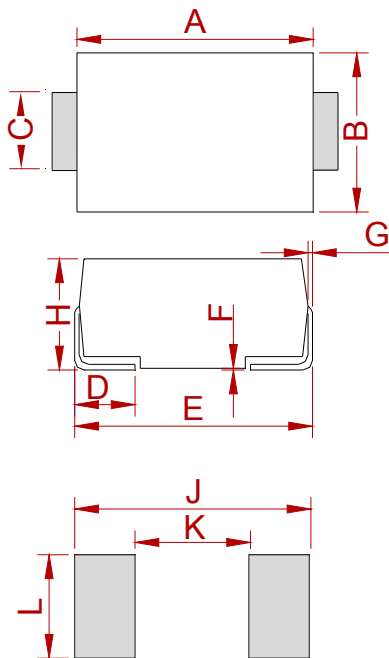


## Soldering parameters

Reflow Condition		Pb-Free assembly (see as below)
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/sec. Max
Time 25°C to Peak Temp ( $T_P$ )		8 min. Max
Do not exceed		+260°C



## PACKAGE MECHANICAL DATA



DO-214AC (SMA)

Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	4.25	4.65	0.167	0.183
B	2.50	2.90	0.098	0.114
C	1.35	1.65	0.053	0.065
D	0.76	1.52	0.030	0.060
E	4.93	5.28	0.194	0.208
F	0.051	0.203	0.002	0.008
G	0.15	0.31	0.006	0.012
H	1.98	2.41	0.078	0.095
J	6.50		0.256	
K		2.30		0.090
L	1.70		0.067	

## REEL SPECIFICATION

P/N	PKG	QTY
RS2A THRU RS2M	SMA	2000

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