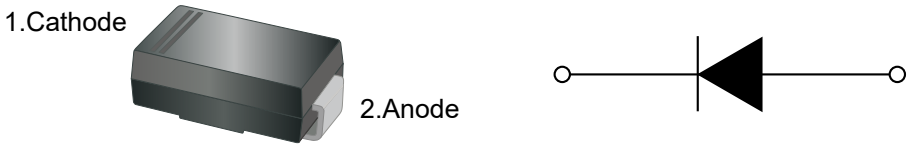
UMW ES1A THRU ES1J

Surface Mount Superfast Recovery Rectifier

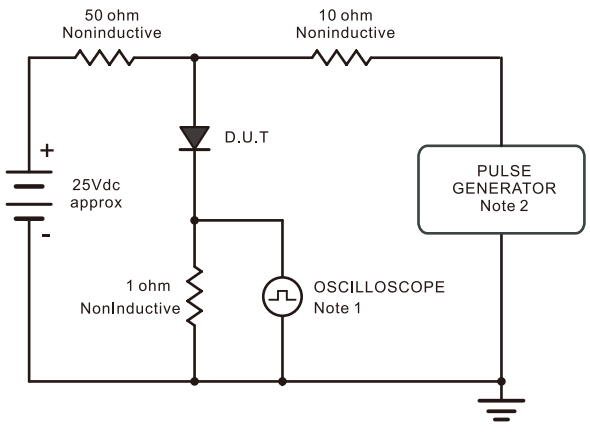
1.Features

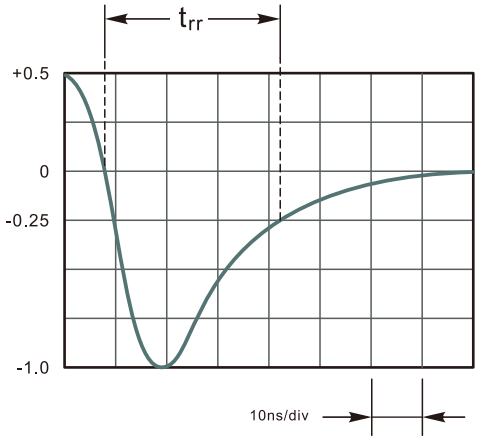
- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Superfast reverse recovery time
- Lead free in comply with EU RoHS 2011/65/EU directives

2.Pinning Information



3.Reverse Recovery Time Characteristic And Test Circuit Diagram





Set time Base for 10ns/div

Note:

1.Rise Time = 7ns, max.
Input Impedance = 1megohm,22pF.

2.RiER Time =10ns, max.
Source Impedance = 50 ohms.

4.Absolute Maximum Ratings and Characteristics

Ratings at 25°C ambient temperature unlss otherwise specified.

Single phase half-wave 60Hz,resistive or inductive load,for capacitive load current derate by 20%.

Parameter		Symbols	ES1A	ES1B	ES1C	ES1D	ES1E	ES1G	ES1J	Units
Maximum repetitive peak reverse voltage		V_{RRM}	50	100	150	200	300	400	600	V
Maximum RMS voltage		V_{RMS}	35	70	105	140	210	280	420	V
Maximum DC blocking voltage		V_{DC}	50	100	150	200	300	400	600	V
Maximum average forward rectified current at T_C=125°C		$I_{F(AV)}$	1							A
Peak forward surge current 8.3ms single half sine wave superimposed on rated load (JEDEC Method)		I_{FSM}	30							A
Maximum forward voltage at 1A		V_F	1				1.25		1.7	V
Maximum DC reverse current at	T_A=25°C	I_R	5							μA
at rated DC blocking voltage	T_A=125°C		100							μA
Typical junction capacitance at V_R=4V, f=1MHz		C_J	15							pF
Maximum Reverse Recovery Time (1)		t_{rr}	35							ns
Typical Thermal Reristance (2)		$R_{\theta JA}$	110							°C/W
Operating junction and storage temperature range		T_J,T_{STG}	-55 to 150							°C

Note:

1.Measured with I_F=0.5A, I_R=1A, I_{rr}=0.25A.

2.P.C.B. mounted with 1.0 X 1.0" (2.54 X 2.54 cm) copper pad areas.

5.Typical Characteristic

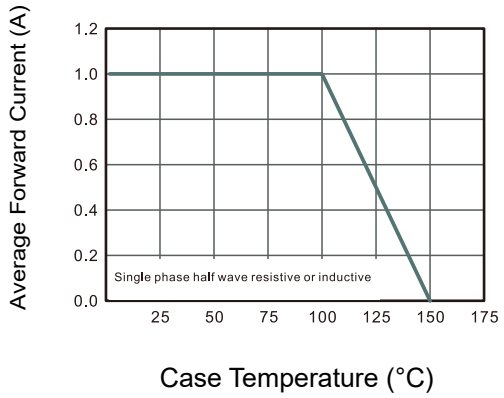


Figure 1: Maximum Average Forward Current Rating

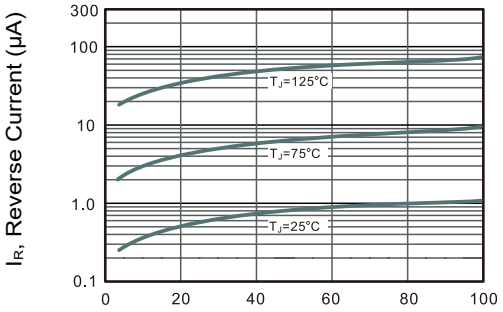


Figure 2: Typical Reverse Characteristics

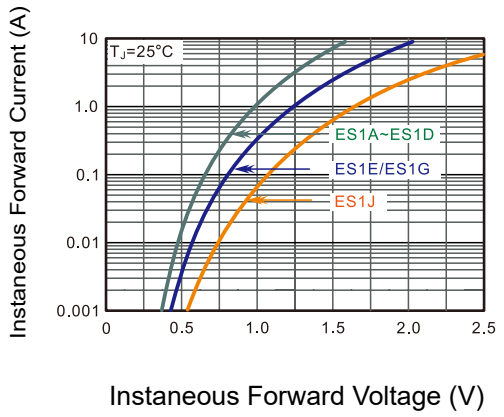


Figure 3: Typical Forward Characteristics

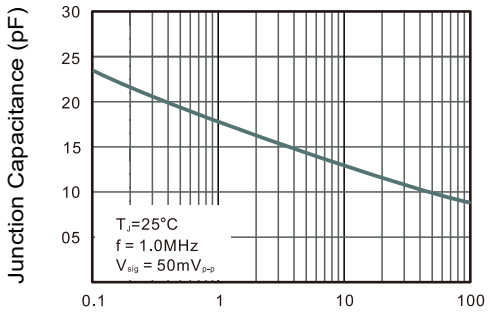


Figure 4: Typical Junction Capacitance

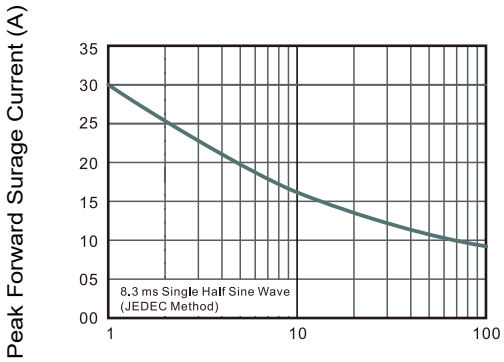
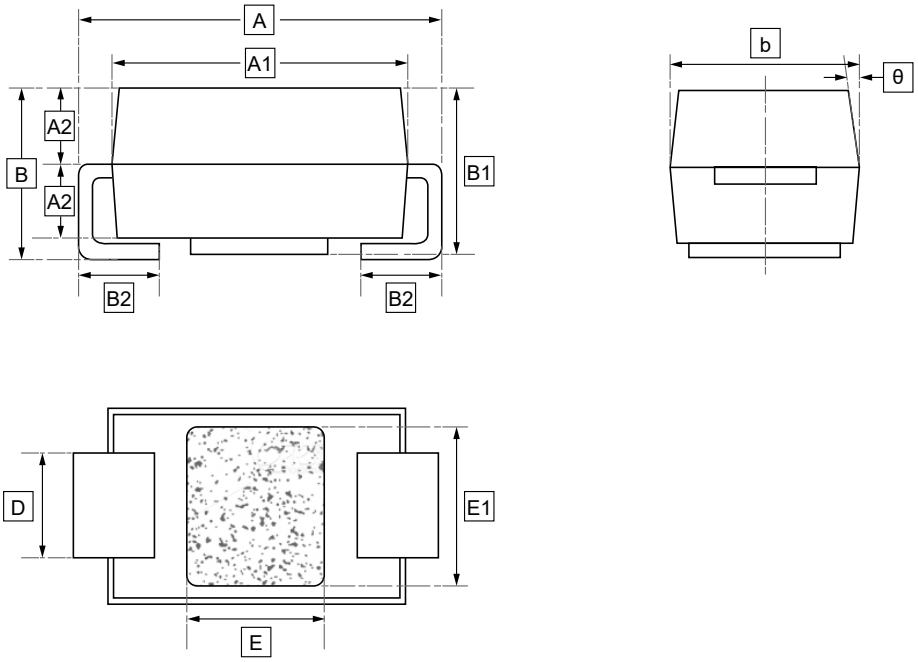


Figure 5: Maximum Non-Repetitive Peak Forward Surage Current

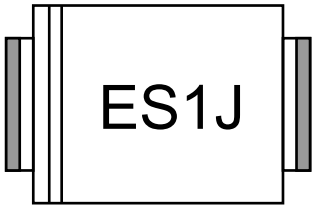
6.SMA Package Outline Dimensions



DIMENSIONS (mm are the original dimensions)

Symbol	A	A1	A2	B	B1	B2	b	D	E	E1	θ
Min	4.9	4.05	0.97	2.18	2.15	1.0	2.55	1.38	1.8	2.0	5°
Max	5.1	4.15	1.03	2.38	2.25	1.4	2.65	1.42	2.0	2.2	

7.Ordering Information



Order Code	Marking	Package	Base QTY	Delivery Mode
UMW ES1A	ES1A	SMA	2000	Tape and reel
UMW ES1B	ES1B	SMA	2000	Tape and reel
UMW ES1C	ES1C	SMA	2000	Tape and reel
UMW ES1D	ES1D	SMA	2000	Tape and reel
UMW ES1E	ES1E	SMA	2000	Tape and reel
UMW ES1G	ES1G	SMA	2000	Tape and reel
UMW ES1J	ES1J	SMA	2000	Tape and reel

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