

Features

- ✧ For surface mounted application
- ✧ Low profile package
- ✧ Low power loss, high efficiency
- ✧ Ideal for automated placement
- ✧ Glass passivated chip junction
- ✧ High temperature soldering:
260°C/10 seconds at terminals
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode



Mechanical Data

- ✧ Case: Sub SMA plastic case
- ✧ Terminal: Pure tin plated, lead free
- ✧ Polarity: Color band cathode end
- ✧ Packing: 8mm/12mm tape per EIA STD RS-481
- ✧ Weight: 0.0196 grams

Ordering Information (example)

Part No.	Package	Packing	Packing code	Packing code (Green)
ES1AL	Sub-SMA	3K / 7" REEL	RV	RVG

Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbol	ES 1AL	ES 1BL	ES 1CL	ES 1DL	ES 1FL	ES 1GL	ES 1HL	ES 1JL	Unit
Marking code		EAL	EBL	ECL	EDL	EFL	EGL	EHL	EJL	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	500	600	V
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	350	420	V
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	500	600	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	1								A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	30								A
Maximum Instantaneous Forward Voltage (Note 1) @ 1 A	V_F	0.95			1.3		1.7			V
Maximum Reverse Current @ Rated VR $T_A=25\text{ }^\circ\text{C}$ $T_A=125\text{ }^\circ\text{C}$	I_R	5 100								uA
Maximum Reverse Recovery Time (Note 2)	T_{rr}	35								nS
Typical Junction Capacitance (Note 3)	C_j	10			8					pF
Typical Thermal Resistance	$R_{\theta JA}$ $R_{\theta JL}$	85 35								$^\circ\text{C/W}$
Operating Temperature Range	T_J	- 55 to + 150								$^\circ\text{C}$
Storage Temperature Range	T_{STG}	- 55 to + 150								$^\circ\text{C}$

Note 1: Pulse Test with PW=300 usec, 1% Duty Cycle

Note 2: Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$

Note 3: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

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RATINGS AND CHARACTERISTIC CURVES (ES1AL THRU ES1JL)

FIG.1 FORWARD CURRENT DERATING CURVE

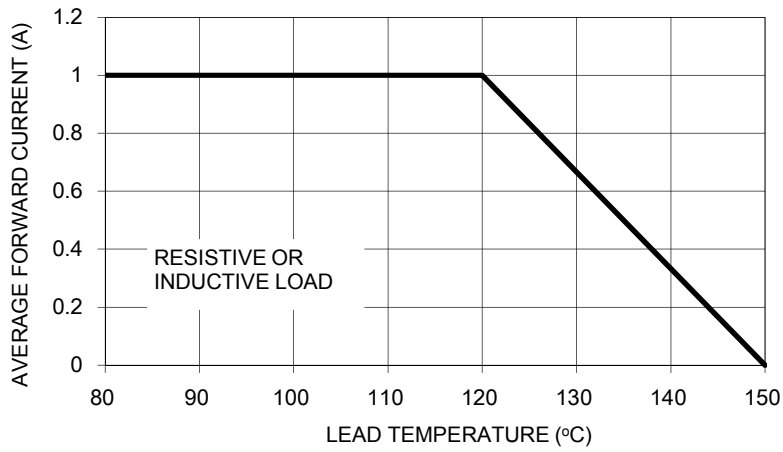


FIG. 2 TYPICAL FORWARD CHARACTERISTICS

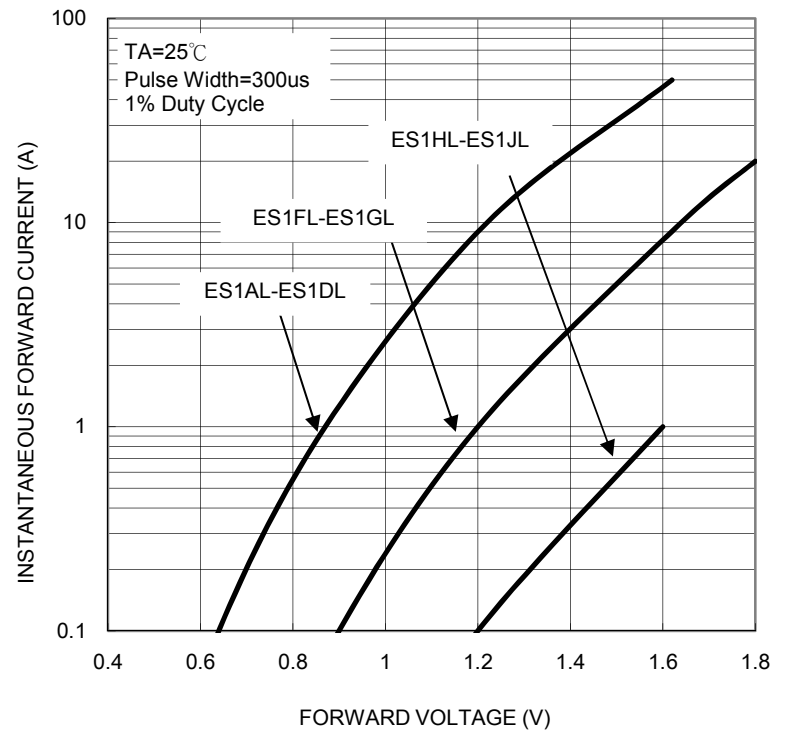


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

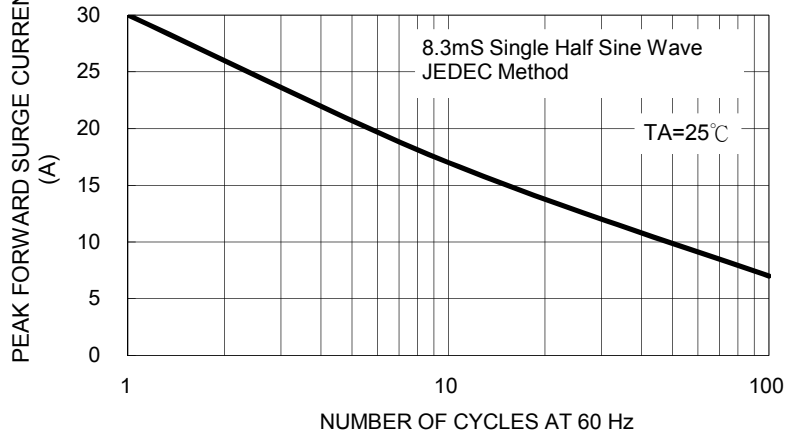


FIG. 4 TYPICAL JUNCTION CAPACITANCE

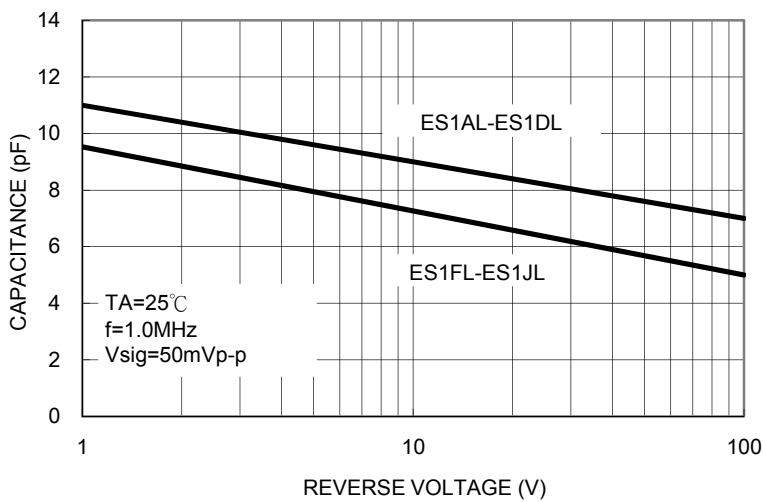


FIG. 5 TYPICAL REVERSE CHARACTERISTICS

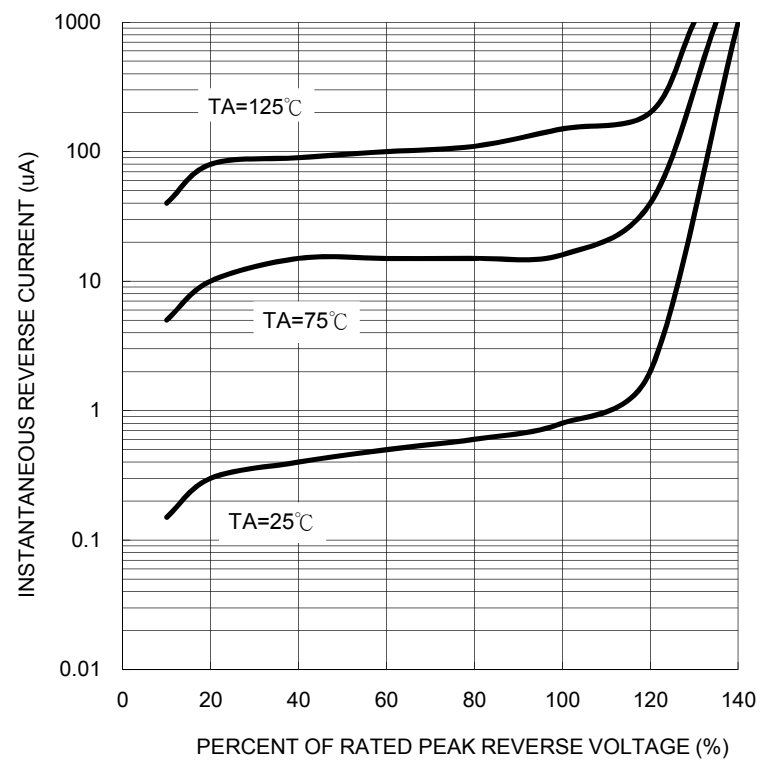
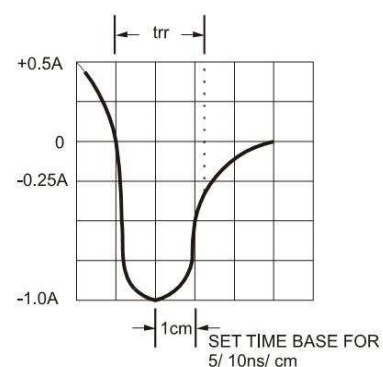
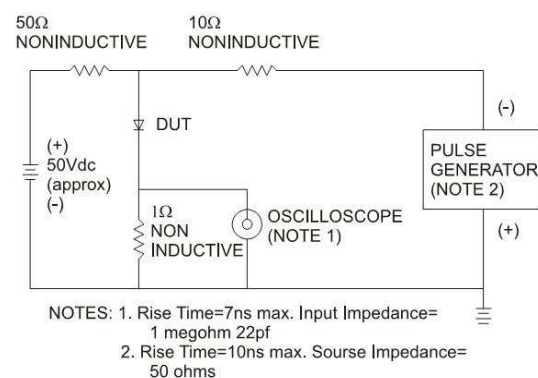


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

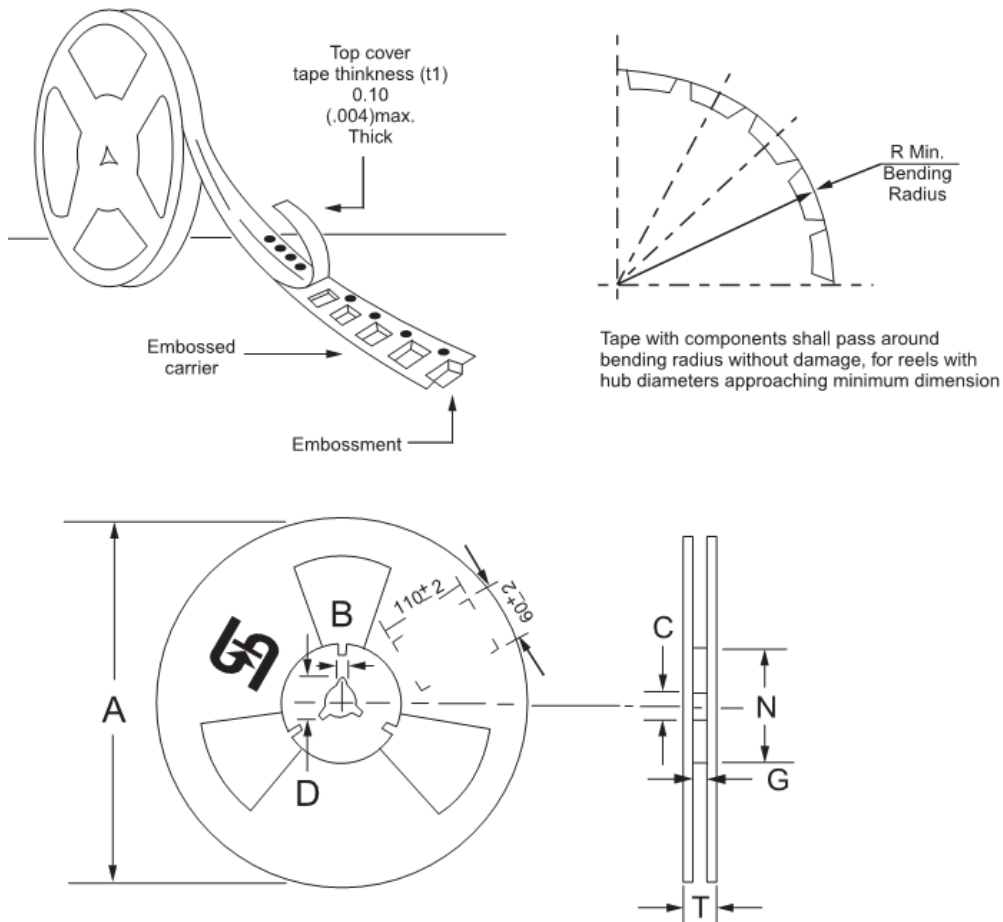


Ordering information

Part No.	Package	Packing	Tape Size	Packing code	Packing code (Green)
ES1XL (Note)	Sub-SMA	1.8K / 7" REEL	8mm	RU	RUG
	Sub-SMA	3K / 7" REEL	8mm	RV	RVG
	Sub-SMA	7.5K / 13" REEL	8mm	RT	RTG
	Sub-SMA	7.5K / 13" Plastic REEL	8mm	MT	MTG
	Sub-SMA	10K / 13" REEL	8mm	RQ	RQG
	Sub-SMA	10K / 13" Plastic REEL	8mm	MQ	MQG
	Sub-SMA	1.8K / 7" REEL	12mm	R3	R3G
	Sub-SMA	3K / 7" REEL	12mm	RF	RFG
	Sub-SMA	7.5K / 13" REEL	12mm	R2	R2G
	Sub-SMA	7.5K / 13" Plastic REEL	12mm	M2	M2G
	Sub-SMA	10K / 13" REEL	12mm	RH	RHG
	Sub-SMA	10K / 13" Plastic REEL	12mm	MH	MHG

Note: "x" is Device Code from "A" thru "J".

Tape & Reel specification

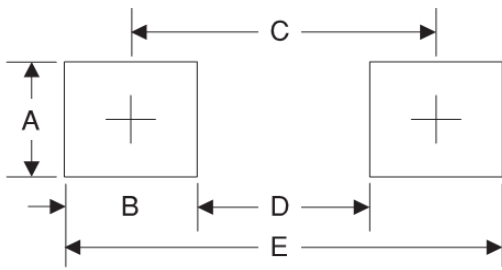


Reel Size	Tape Size	A	B	C	D	N	G	T
		±2.0	±0.4	+0.5;-0.2	min	±1.0	+0.8;-0	max
7"	8mm	178	1.9	13	21	62	8.2	10.6
	12mm						12.2	14.6
		max	±0.5	±0.5	min	±0.5	+2.0;-0	max
13"	8mm	330	2	13	20.2	75	8.5	14.5
	12mm						12.4	18.4

Unit (mm)

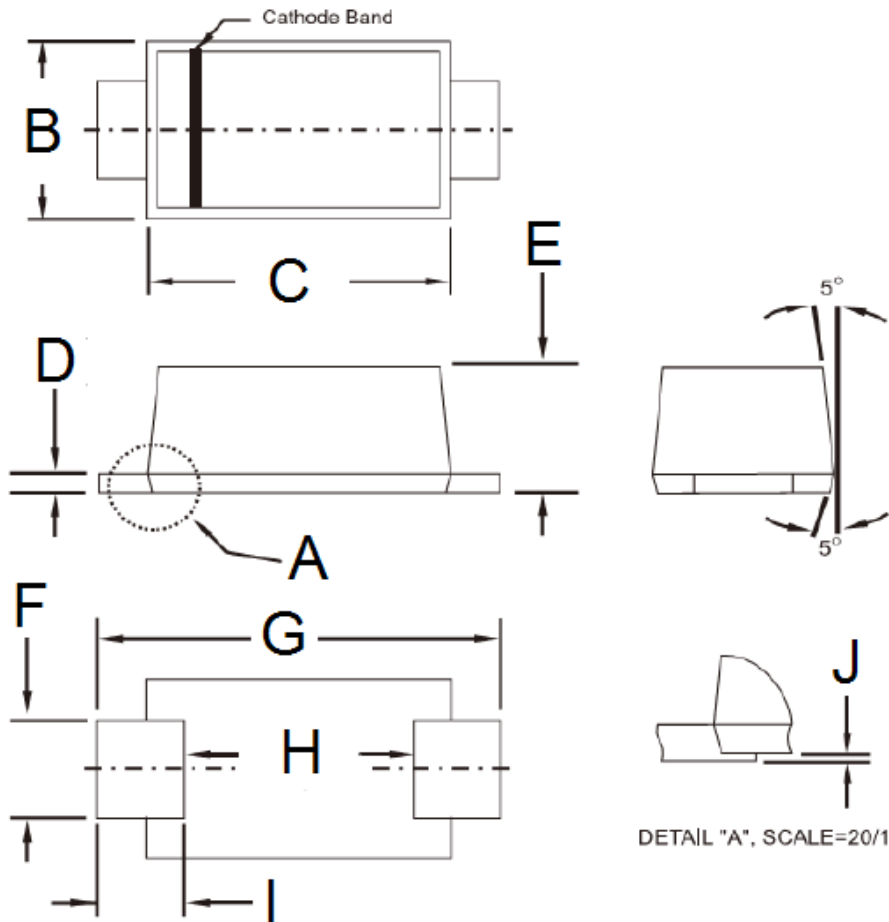
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Suggested PAD Layout



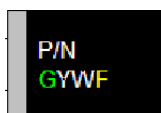
Symbol	Unit(mm)
A	1.4
B	1.2
C	3.1
D	1.9
E	4.3

Package Outline Dimensions



DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
B	1.70	1.90	0.067	0.075
C	2.70	2.90	0.106	0.114
D	0.16	0.30	0.006	0.012
E	1.23	1.43	0.048	0.056
F	0.80	1.20	0.031	0.047
G	3.40	3.80	0.134	0.150
H	2.45	2.60	0.096	0.102
I	0.35	0.85	0.014	0.033
J	0.00	0.10	0.000	0.004

Marking Diagram



P/N = Marking Code
 G = Green Compound
 YW = Date Code
 F = Factory Code