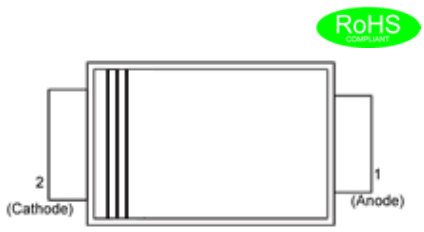
ES1A~ES1G

SUPER FAST RECOVERY RECTIFIER

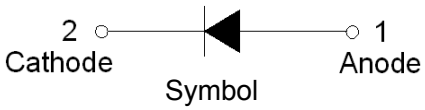
Rev.3.1

DESCRIPTION:

- ✧ Plastic package has underwriters laboratory flammability classification 94V-0
- ✧ For surface mounted applications in order to optimize board space
- ✧ Glass passivated chip junction
- ✧ Lead free in comply with EU RoHS 2011/65/EU directives
- ✧ Super fast recovery time



DO-214AC(SMA)



Symbol

MECHANICAL DATA

- ✧ Case: JEDEC DO-214AC molded plastic
- ✧ Terminals: Solder plated, solderable per J-STD-002
- ✧ Polarity: Color band denotes cathode end
- ✧ Weight: 0.06599 gram

ABSOLUTE MAXIMUM RATING AND ELECTRICAL CHARACTERISTICS

(Rating at 25℃ ambient temperature unless otherwise specified.)

Parameter		Symbol	ES1A	ES1B	ES1D	ES1G	Unit
Maximum repetitive peak reverse voltage		V_{RRM}	50	100	200	400	V
Maximum RMS voltage		V_{RMS}	35	70	140	280	V
Maximum DC blocking voltage		V_{DC}	50	100	200	400	V
Maximum average forward current at T_L=110℃		$I_{F(AV)}$	1.0				A
Peak forward surge current: 8.3ms single half sine-wave superimposed on rated load		I_{FSM}	30				A
Maximum forward voltage @I_F=1.0A		V_F	0.95			1.3	V
Maximum DC reverse current at rated DC blocking voltage	T_j=25℃	I_R	5				μA
	T_j=150℃		200				μA
Typical junction capacitance V_R=4.0V, f=1MHz		C_J	15			10	pF
Maximum reverse recovery time I_F=0.5A, I_R=1A, I_{rr}=0.25A		t_{rr}	35				ns
Operating junction and storage temperature range		T_j , T_{stg}	-55 to +150				℃

THERMAL RESISTANCES

Symbol	Parameter	ES1A	ES1B	ES1D	ES1G	Unit
$R_{th(j-c)}$	Junction to case (Note1)	20				℃/W

Note1：Thermal resistance from junction to case mounted on P.C.B. with 5.0 mm x 5.0 mm copper pad areas.

MARKING

E	Super Fast Recovery Rectifier
S	Surface Mount
1	$I_{F(AV)}$=1.0A
G	V_{RRM}:400V

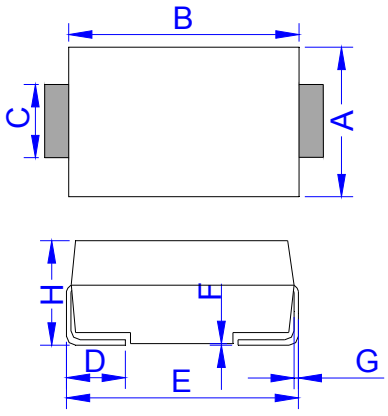
xH1：Month，1、2、3 ～ 9、A、B、C

3x1：

2018	2019	2020	2021	2022	2023	2024
H	I	J	K	L	M	N
2025	2026	2027	2028	2029	2030	…
O	P	Q	R	S	T	…

3Hx：Batch number

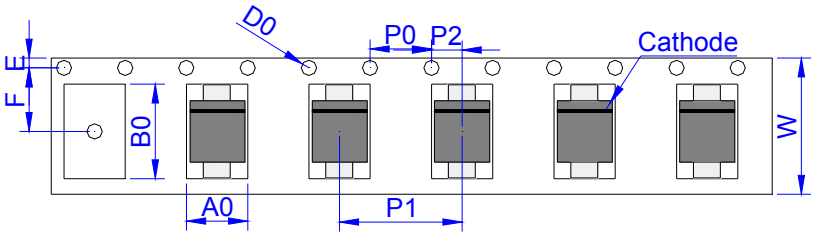
PACKAGE MECHANICAL DATA

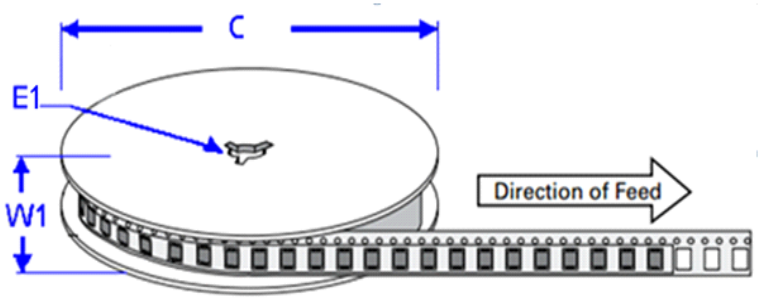


DO-214AC (SMA)

Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.18	2.90	0.086	0.114
B	3.99	4.57	0.157	0.180
C	1.10	2.21	0.043	0.087
D	0.76	1.52	0.030	0.060
E	4.70	5.69	0.185	0.224
F		0.203		0.008
G	0.152	0.305	0.006	0.012
H	1.70	2.45	0.067	0.096

TAPE AND REEL SPECIFICATION-SMA





Ref.	Dimensions	
	Millimeters	Inches
A0	2.79 ± 0.3	0.110 ± 0.012
B0	5.33 ± 0.3	0.210 ± 0.012
C	330.0	13.0
D0	1.55 ± 0.1	0.061 ± 0.004
E	1.75 ± 0.2	0.069 ± 0.008
E1	13.3 ± 0.3	0.524± 0.012
F	5.5 ± 0.2	0.217 ± 0.008
P0	4.00 ± 0.2	0.157 ± 0.008
P1	4.00 ± 0.2	0.157 ± 0.008
P2	2.00 ± 0.2	0.079 ± 0.008
W	12.0± 0.2	0.472 ± 0.008
W1	15.7 ± 2.0	0.618 ± 0.079

OUTLINE	UNIT WEIGHT (g/PCS) typ.	REEL (PCS)	PER CARTON (PCS)	REEL DIAMETERS (mm)
TAPING	0.06599	7,500	120,000	330

CHARACTERITICS CURVE

FIG.1: Typical forward characteristics (25℃)

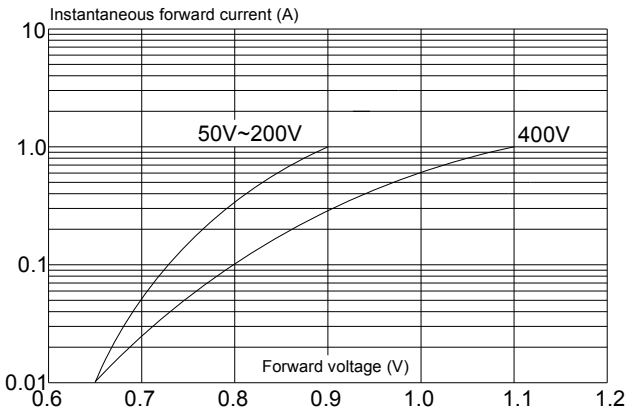


FIG.2: Typical reverse characteristics

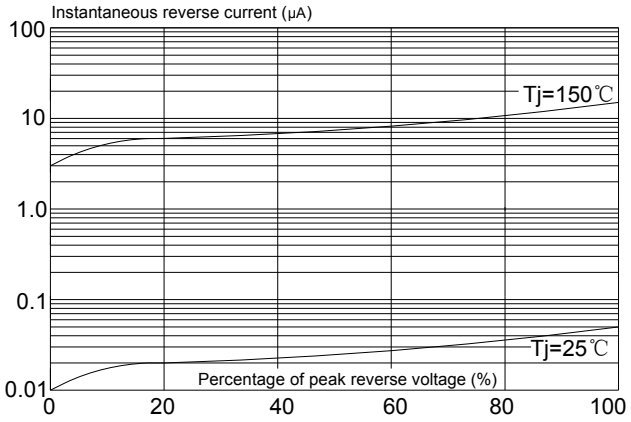


FIG.3: Maximum non-repetitive peak forward surge current

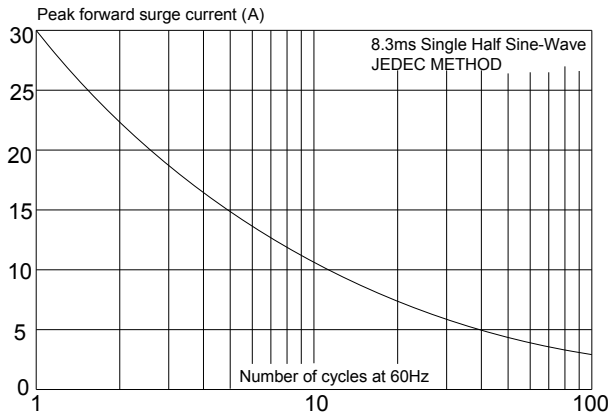
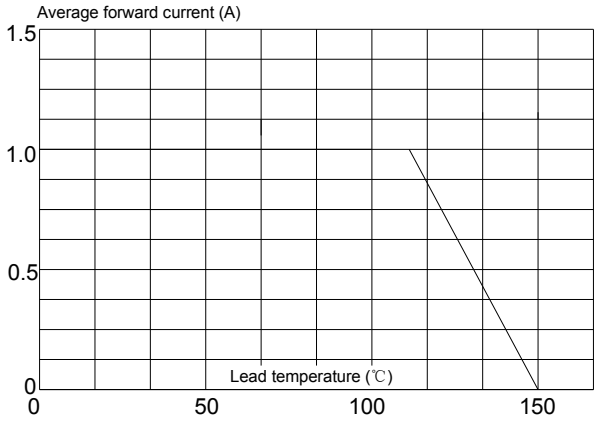


FIG.4: Forward current derating curve



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