



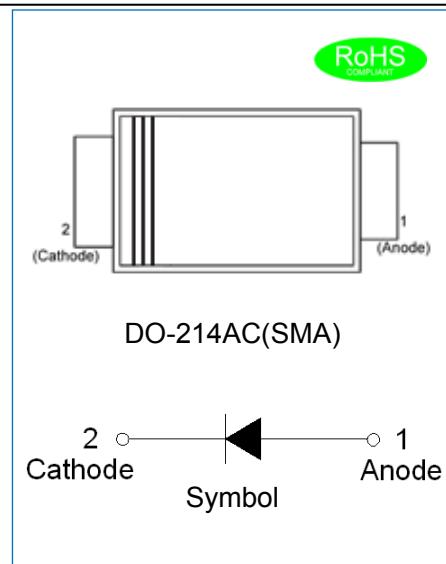
## EES1D

## SUPER FAST RECOVERY RECTIFIER

Rev.1.1

## DESCRIPTION

- ✧ Plastic package has underwriters laboratory flammability classification 94V-0
- ✧ For surface mounted applications
- ✧ Glass passivated chip junction
- ✧ Low forward voltage drop
- ✧ Lead free in comply with EU RoHS 2011/65/EU directives
- ✧ Super fast recovery time



## MECHANICAL DATA

- ✧ Case: JEDEC DO-214AC molded plastic
- ✧ Terminals: Solder plated, solderable per J-STD-002
- ✧ Polarity: Color band denotes cathode end
- ✧ Weight: 0.0673 gram

## ABSOLUTE MAXIMUM RATING AND ELECTRICAL CHARACTERISTICS

(Rating at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbol	EES1D	Unit
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	200	V
Maximum RMS voltage	V <sub>RMS</sub>	140	V
Maximum DC blocking voltage	V <sub>DC</sub>	200	V
Maximum average forward current at T <sub>c</sub> =105°C	I <sub>F(AV)</sub>	1.0	A
Peak forward surge current: 8.3ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	35	A
Maximum forward voltage	I <sub>F</sub> =1.0A	0.92	V
	I <sub>F</sub> =2.0A		
Maximum reverse recovery time I <sub>F</sub> =0.5A, I <sub>R</sub> =1A, I <sub>rr</sub> =0.25A	t <sub>rr</sub>	25	ns
Maximum DC reverse current at rated DC blocking voltage	T <sub>j</sub> =25°C	5.0	μA
	T <sub>j</sub> =150°C		
Typical junction capacitance V <sub>R</sub> =4.0V, f=1MHz	C <sub>J</sub>	45	pF
Operating junction and storage temperature range	T <sub>j</sub> , T <sub>stg</sub>	-55 to +150	°C

## THERMAL RESISTANCES

Symbol	Parameter	EES1D	Unit
$R_{th(j-c)}$	Junction to case(note1)	15	°C/W

Note1: Thermal resistance from junction to case mounted on P.C.B. with 4.0 mm x 4.0 mm copper pad areas.

## MARKING



EE	Super Fast Recovery Rectifier
S	Surface Mount
1	$I_{F(AV)}=1A$
D	$V_{RRM}:200V$

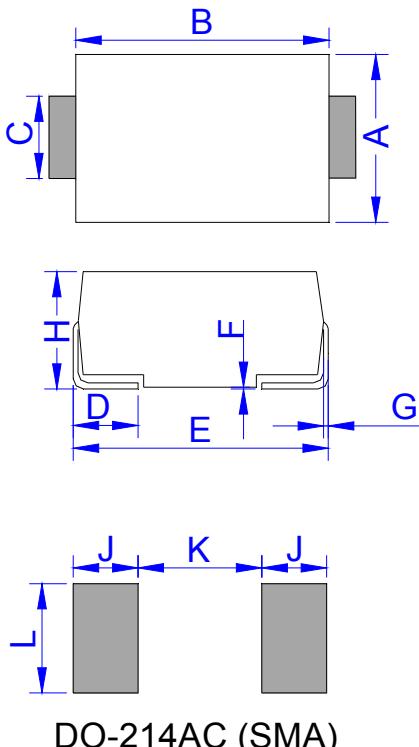
3H1: Month, 1, 2, 3 ~ 9, A, B, C

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	...

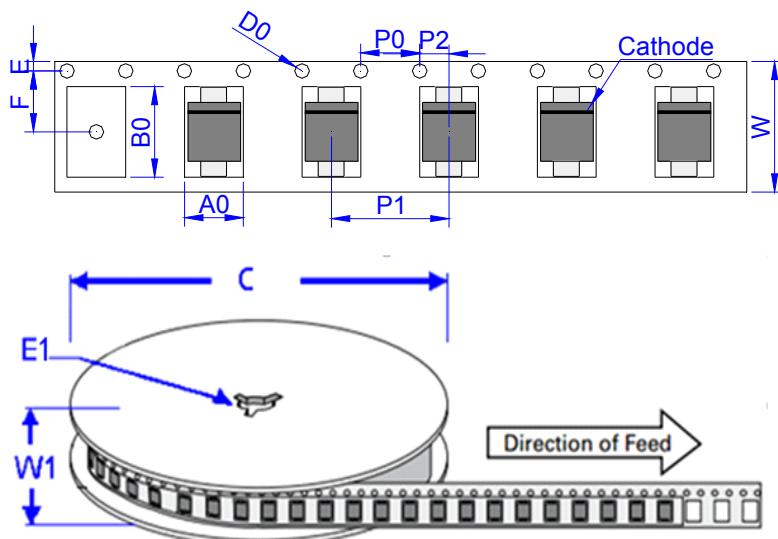
3Hx: Batch number

## PACKAGE MECHANICAL DATA



Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.60	3.00	0.102	0.118
B	4.15	4.65	0.163	0.183
C	1.25	1.65	0.049	0.065
D	0.95	1.52	0.037	0.060
E	4.90	5.30	0.193	0.209
F	0.051	0.203	0.002	0.008
G	0.15	0.31	0.006	0.012
H	2.00	2.44	0.079	0.096
J	2.00		0.079	
K		2.30		0.091
L	1.80		0.071	

## 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	0.0673	7,500	120,000	330

## CHARACTERISTICS CURVE

FIG.1: Typical forward characteristics

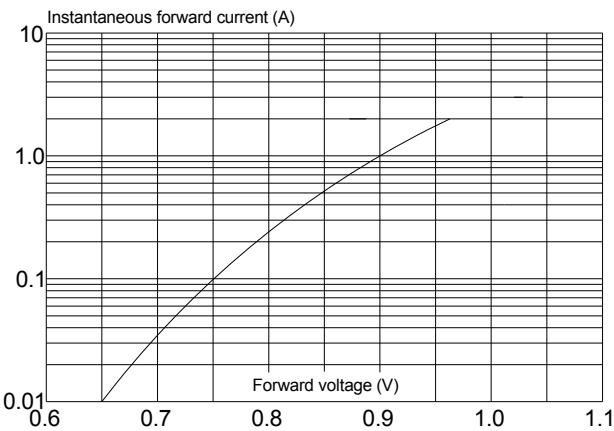


FIG.2: Typical reverse characteristics

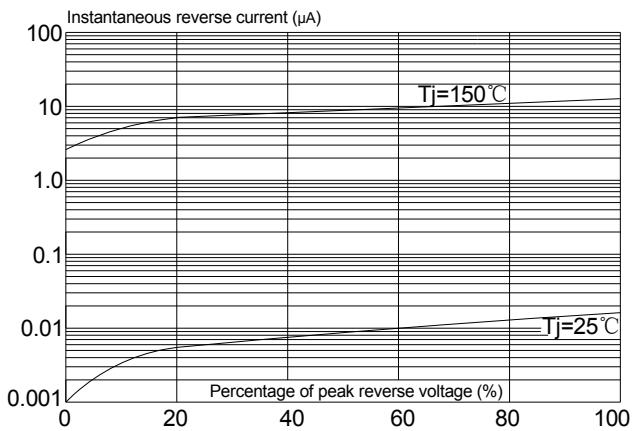


FIG.3: Maximum non-repetitive peak forward surge current

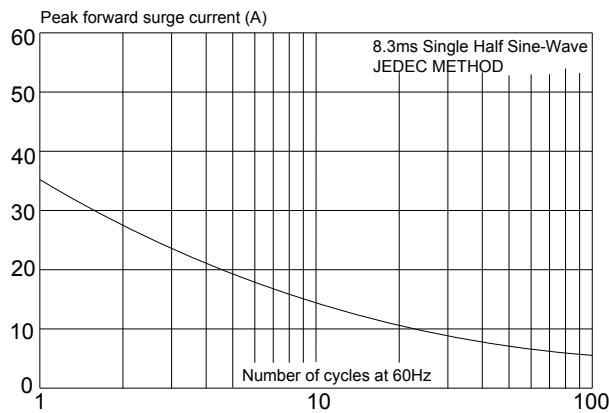
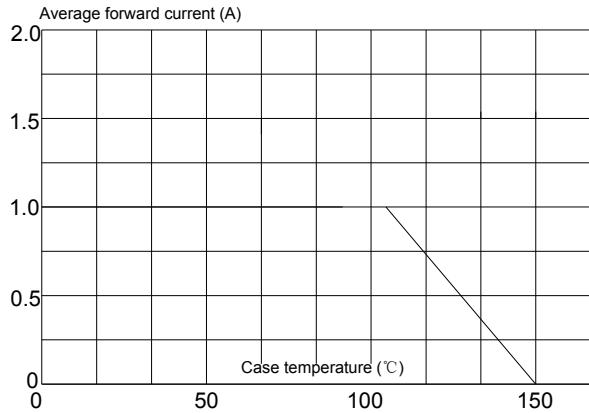


FIG.4: Forward current derating curve



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