



JPCR0102SB

EPI PLANAR HYPERFAST SOFT RECOVERY RECTIFIER

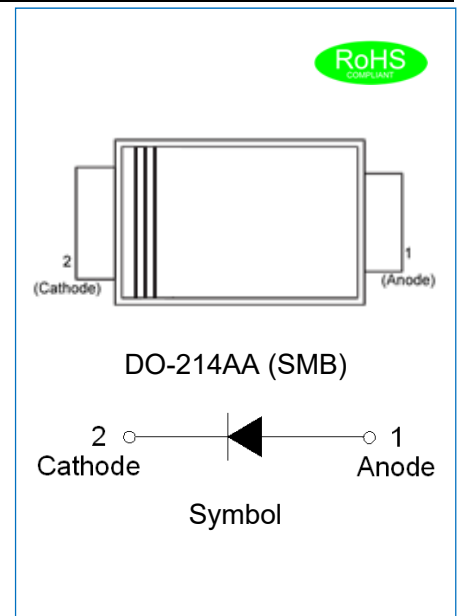
Rev.1.0

DESCRIPTION

- ✧ Plastic package has underwriters laboratory flammability classification 94V-0
- ✧ Lead free in comply with EU RoHS 2011/65/EU directives
- ✧ Low reverse leakage current
- ✧ Hyperfast recovery time
- ✧ Epitaxial planar technology
- ✧ 5th Generation soft fast recovery characteristics
- ✧ Low recovery loss

MECHANICAL DATA

- ✧ Case: JEDEC DO-214AA molded plastic
- ✧ Terminals: Solder plated, solderable per J-STD-002
- ✧ Polarity: Color band denotes cathode end
- ✧ Weight: 0.1 gram



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

Parameter	Symbol	JPCR0102SB	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	200	V
Maximum RMS voltage	V_{RMS}	140	V
Maximum DC blocking voltage	V_{DC}	200	V
Average forward current at $T_C=140^\circ\text{C}$	$I_{F(AV)}$	1	A
Peak forward surge current: 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	35	A
Operating junction and storage temperature range	T_j, T_{stg}	-55 to +175	°C

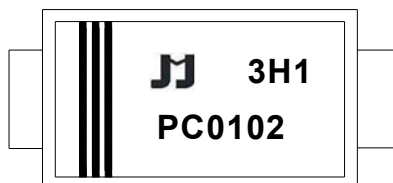
ELECTRICAL CHARACTERISTICS (Rating at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbol	Min.	Typ.	Max.	Unit	
Forward voltage	$I_F=1A, T_j=25^\circ\text{C}$	V_F	-	-	0.87 V	
Reverse leakage current	$V_R=200V, T_j=25^\circ\text{C}$	I_R	-	-	1	μA
	$V_R=200V, T_j=150^\circ\text{C}$		-	-	100	
Reverse recovery time	$I_F=0.5A, I_R=1A, I_{rr}=0.25A$	t_{rr}	-	-	25 ns	

THERMAL RESISTANCES

Symbol	Parameter	Min.	Typ.	Max.	Unit
$R_{th(j-c)}$	Thermal resistance from junction to case	-	35	-	°C/W

MARKING



PC	Planar Hyperfast Recovery Rectifier
01	$I_{F(AV)}=1A$
02	$V_{RRM}:200V$

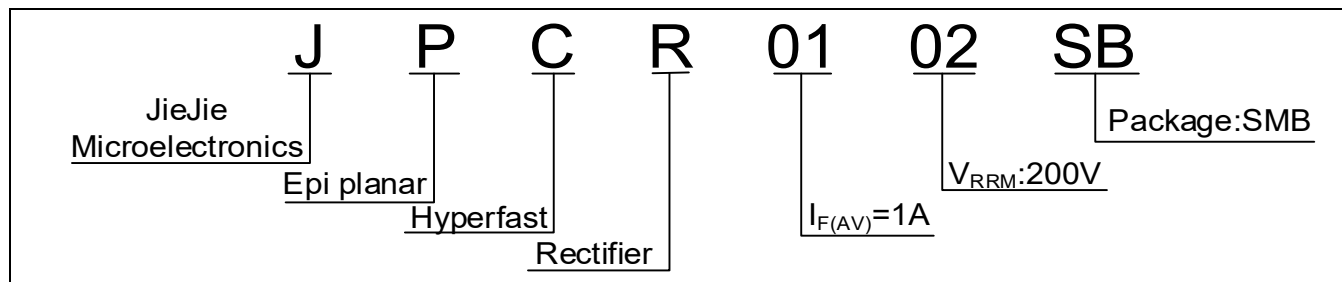
xH1: Month, 1/2/3~9/A/B/C

3x1:

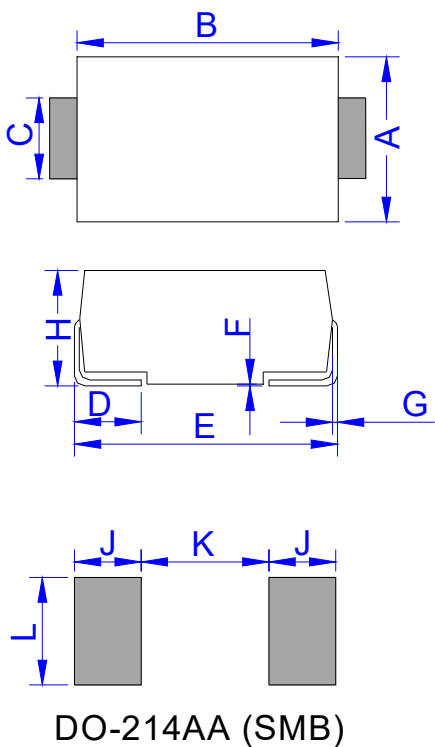
2018	2019	2020	2021	2022	2023	2024
H	I	J	K	L	M	N
2025	2026	2027	2028	2029	2030	...
O	P	Q	R	S	T	...

3Hx: Batch number

ORDERING INFORMATION

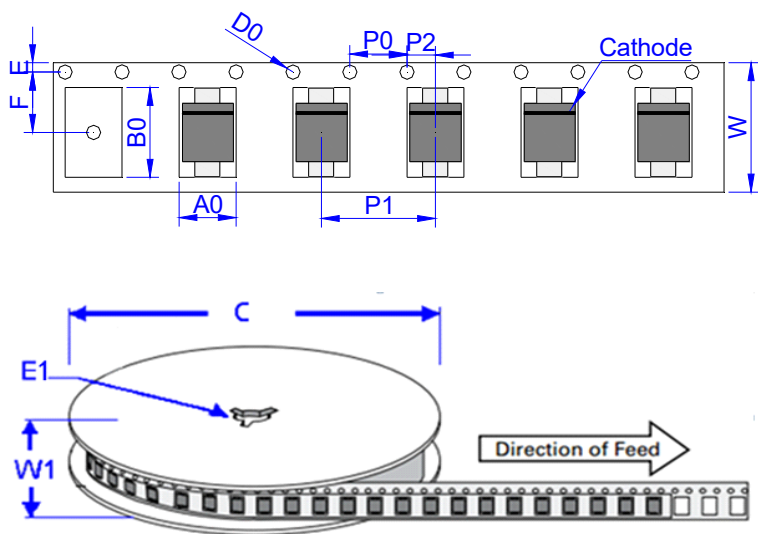


PACKAGE MECHANICAL DATA



Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	3.30	3.94	0.130	0.155
B	4.30	4.80	0.169	0.189
C	1.90	2.20	0.075	0.087
D	0.95	1.52	0.037	0.060
E	5.20	5.60	0.205	0.220
F	0.051	0.203	0.002	0.008
G	0.15	0.31	0.006	0.012
H	2.10	2.40	0.083	0.094
J	2.20		0.087	
K		2.60		0.102
L	2.30		0.091	

TAPE AND REEL SPECIFICATION-SMB



Ref.	Dimensions	
	Millimeters	Inches
A0	3.76 ± 0.3	0.148 ± 0.012
B0	5.69 ± 0.3	0.224 ± 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	8.00 ± 0.2	0.3145 ± 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	0.1	3,000	48,000	330

CHARACTERISTICS CURVE

FIG.1: Typical forward characteristics

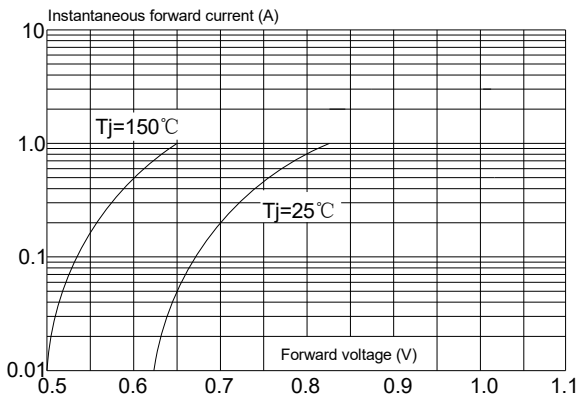


FIG.2: Typical reverse characteristics

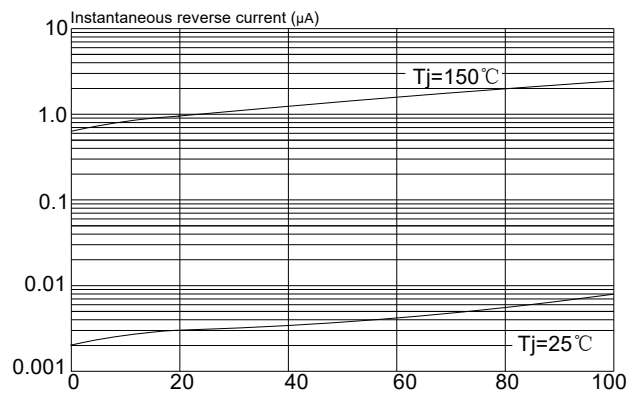


FIG.3: Maximum non-repetitive peak forward surge current

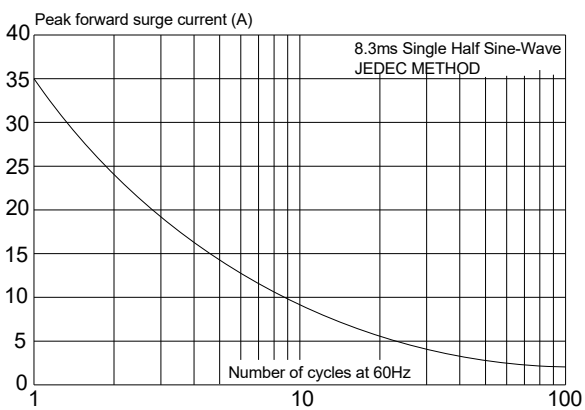


FIG.4: Forward current derating curve

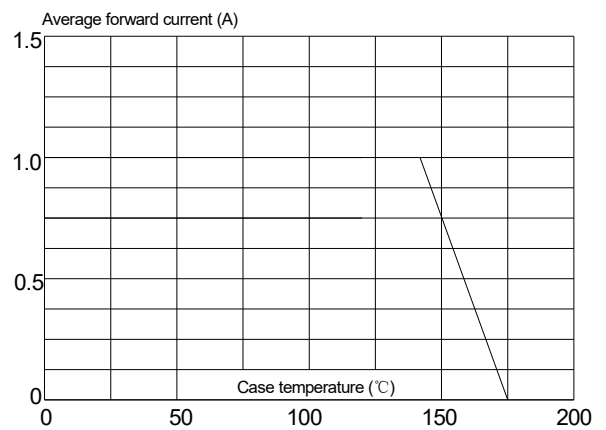
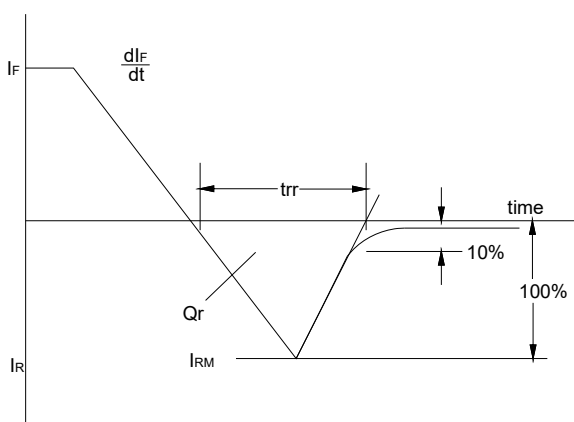


FIG.5: Reverse recovery definitions



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