

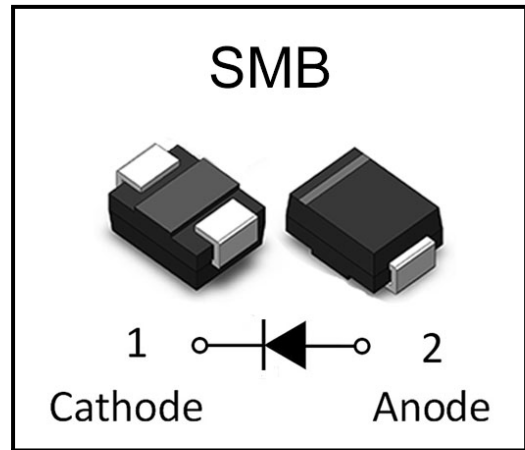
ES3A-ES3M

Rectifier Diode

Features

- Low reverse leakage
- High forward surge capability
- High current capability
- High reliability
- High surge current capability
- Epitaxial construction

Package



General Description

- Case: SMB molded plastic
- Polarity: Color band denotes cathode
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Pure tin plated, lead free
- High temperature soldering guaranteed:260°C/10seconds

Making Code



Ordering information

Part Number	ES3A	ES3B	ES3D	ES3G	ES3J	ES3K	ES3M
Marking	ES3A	ES3B	ES3D	ES3G	ES3J	ES3K	ES3M
Base qty	3K	3K	3K	3K	3K	3K	3K



ES3A-ES3M

Rectifier Diode

Maximum Ratings (@T_A=25°C unless otherwise noted)

Symbol	Characteristics		ES3A	ES3B	ES3D	ES3G	ES3J	ES3K	ES3M	Unit
V _{RRM}	Maximum Repetitive Peak Reverse Voltage		50	100	200	400	600	800	1000	V
V _{RMS}	Maximum RMS Voltage		35	70	140	280	420	560	700	V
V _{DC}	Maximum DC Blocking Voltage		50	100	200	400	600	800	1000	V
I _{F(AV)}	Maximum Average Forward Rectified Current		3.0							A
I _{FSM}	Non-repetitive peak forward surge current 8.3 ms singlehalf sine-wave		80					60		A
V _F	Maximum Forward Voltage @I _F =3.0A		0.95			1.25	1.7	3.2		V
I _R	Maximum DC Reverse	T _A = 25°C	5							uA
	Current@V _{DC}	T _A = 125°C	100							
t _{rr}	Maximum Reverse Recovery Time I _F =0.5A,I _R =1.0A,I _{RR} =0.25A		35							nS
C _J	Typical Junction Capacitance@V _R =4.0V,f=1MHz		60							pF
R _{θJA}	Typical Thermal Resistance ⁽¹⁾		85							°C/W
T _J	Operating Junction Temperature Range		-55 to +150							°C
T _{STG}	Storage Temperature Range		-55 to +150							°C

Note:(1)Thermal resistance from junction to ambient, PCB mounted.



ES3A-ES3M

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Typical Performance Characteristics($T_J = 25^\circ\text{C}$, unless otherwise noted)

Figure 1: Typical Forward Characteristics

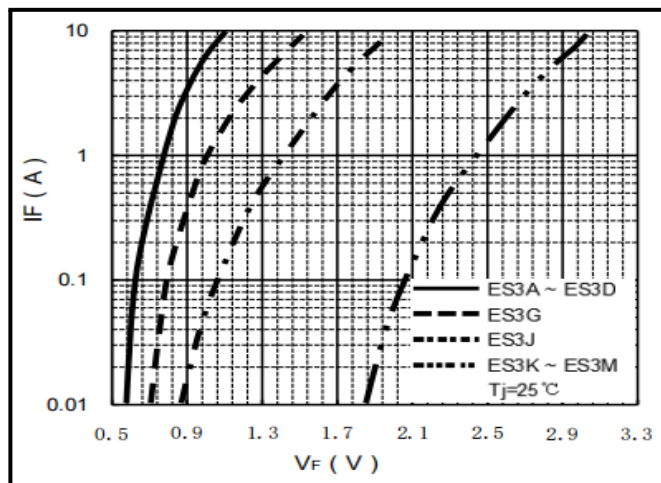


Figure 2: Forward Current Derating Curve

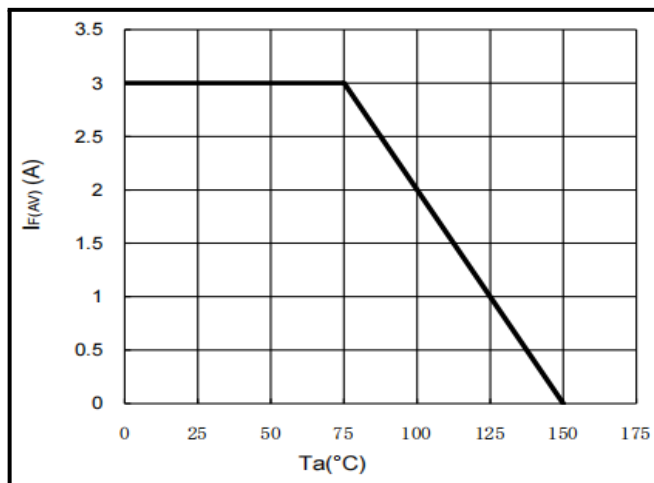


Figure 3: Maximum Non-Repetitive Peak Forward Surge

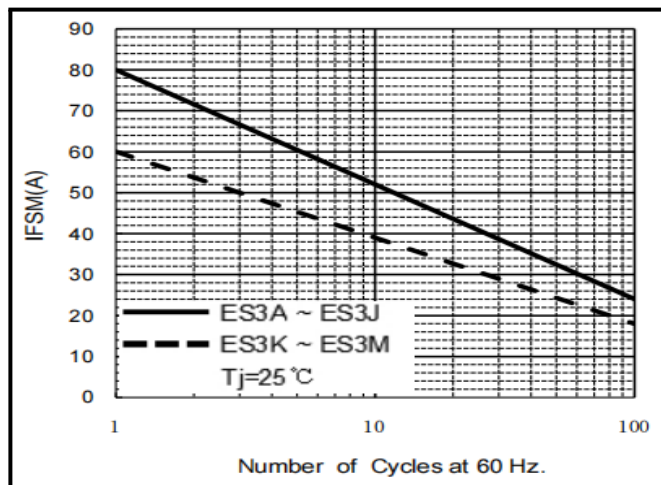
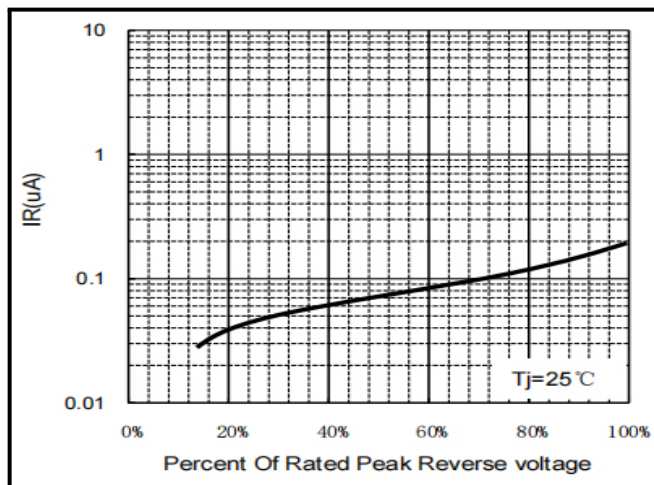


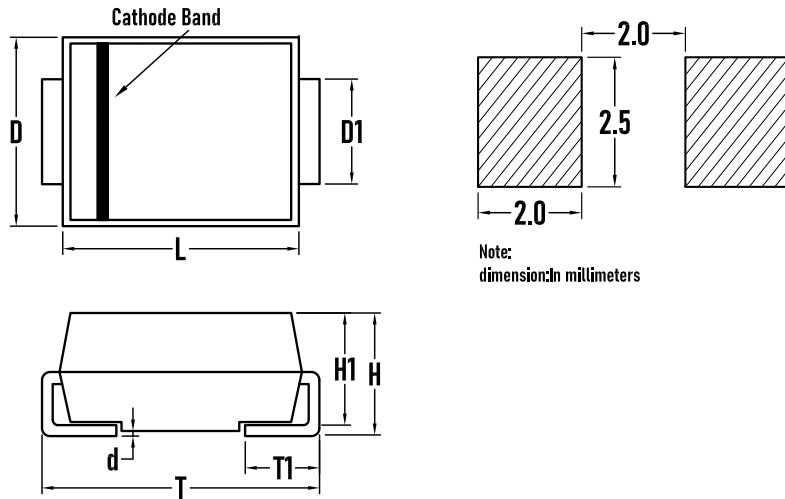
Figure 4: Typical Reverse Characteristics



ES3A-ES3M

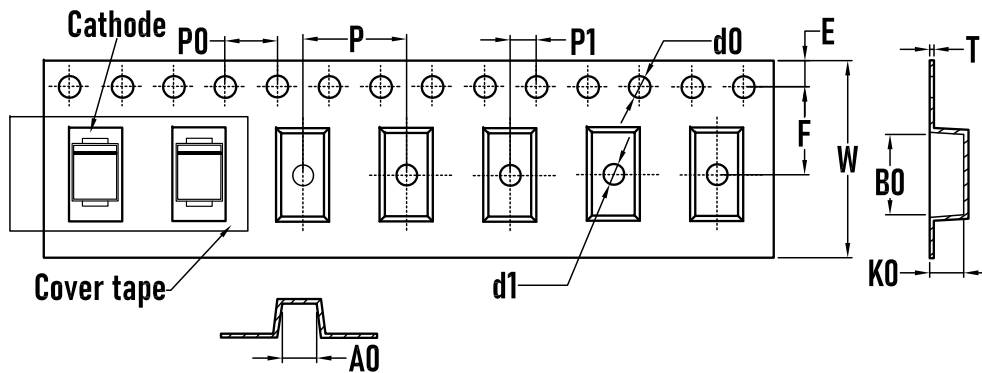
Rectifier Diode

Outline Drawing - SMB



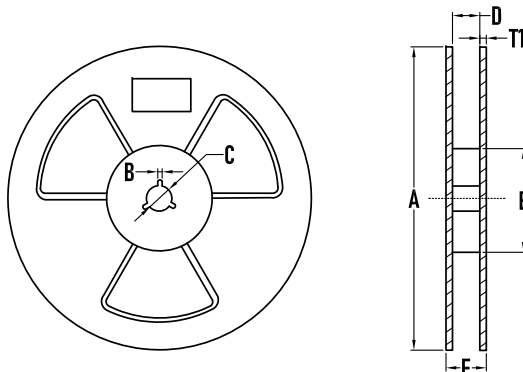
SYMBOL	MILLIMETER		Inches	
	MIN.	MAX.	MIN.	MAX.
D	3.3	3.9	0.130	0.154
D1	1.7	2.3	0.067	0.091
T	5.1	5.7	0.201	0.224
T1	0.8	1.6	0.031	0.063
d	—	0.3	—	0.012
H1	2.0	2.4	0.079	0.094
H	2.1	2.5	0.083	0.098
L	4.0	4.7	0.157	0.185

Packaging Tape - SMB



SYMBOL	MILLIMETER
A0	3.60±0.1
B0	5.45±0.1
d0	1.50±0.1
d1	1.50±0.1
E	1.75±0.1
F	5.50±0.1
K0	2.30±0.1
P	8.00±0.1
P0	4.00±0.1
P1	2.00±0.1
W	12.00±0.1
T	0.22±0.02

Packaging Reel



SYMBOL	MILLIMETER
A	323±2
B	3.0±0.2
C	15.0±0.5
D	13±2
E	73±2
T1	2.2±0.2
Quantity	3000PCS

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Specifications are subject to change without notice.

Please refer to <http://www.born-tw.com> for current information.

Revision: 2022-Jan-1-A

