

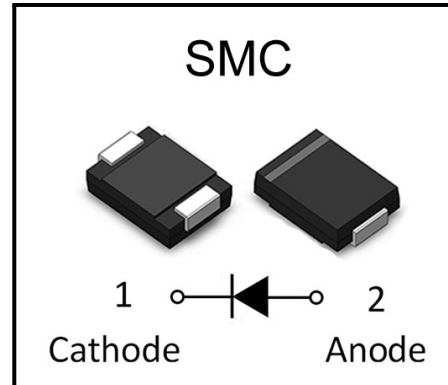
ES6A-ES6J

Fast Recovery
Rectifier Diode

Features

- Super fast switching time for high efficiency
- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- Epitaxial construction

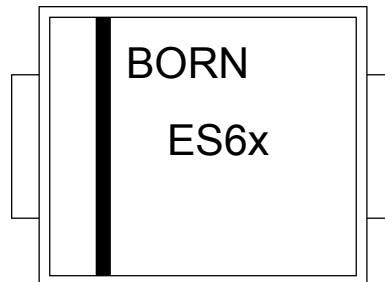
Package



Description

- Case: molded plastic
- Polarity: Color band denotes cathode
- Package: SMC Plastic Package

Making Code



Ordering information

Part Number	ES6A	ES6B	ES6C	ES6D	ES6F	ES6G	ES6H	ES6J
Marking	ES6A	ES6B	ES6C	ES6D	ES6F	ES6G	ES6H	ES6J
Base qty	3K	3K	3K	3K	3K	3K	3K	3K



ES6A-ES6J

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Maximum Ratings and Electrical Characteristics@T_A=25°C unless otherwise noted

Symbol	Parameters	ES6A	ES6B	ES6C	ES6D	ES6F	ES6G	ES6H	ES6J	Units
V _{RRM}	Max. Recurrent Peak Reverse Voltage	50	100	150	200	300	400	500	600	V
V _{RMS}	Maximum RMS Voltage	35	70	105	140	210	280	350	420	V
V _{DC}	Maximum DC Blocking Voltage	50	100	150	200	300	400	500	600	V
I _{AV}	Maximum Average Forward Rectified Current	6.0								A
I _{FSM}	Forward Surge Current @60Hz Half-sine wave,1 cycle, T _j =25°C	150								A
	Forward Surge Current@1ms, quare wave, 1 cycle, T _j =25°C	300								A
V _F	Maximum Forward Voltage@I _{FM} =5.0A	0.95				1.3		1.7		V
I _R	Max. DC reverse current@T _j =25°C	5								uA
	Max. DC reverse current@T _j =125°C	100								
I ² t	Current squared time @1ms≤t≤8.3ms T _j =25°C	94								A ² s
t _{rr}	Maximum reverse recovery time @I _F =0.5A,I _R =1.0A,I _{rr} =0.25A	35								ns
C _j	Typ. junction capacitance Measured at 1Mhz and Applied Reverse Voltage of 4.0V.D.C	85				45		40		pF
R _{θJA} ⁽¹⁾	Typical Thermal Resistance	50								°C/W
R _{θJL} ⁽¹⁾		15								
R _{θJC} ⁽¹⁾		12								
T _J	Operating Junction Temperature Range	-55 to +150								°C
T _{STG}	Storage Temperature Range	-55 to +150								°C

Note1: (1)Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.6" x 0.6" (16 mm x 16 mm) copper pad areas



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

Figure 1: I_O - T_L Curve

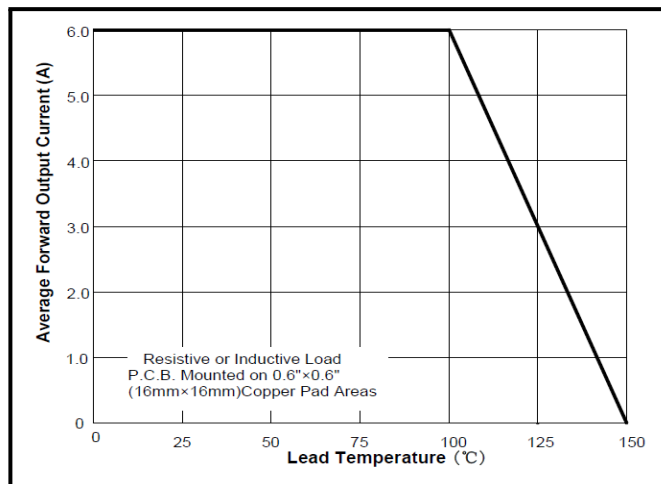


Figure 2: Surge Forward Current Capability

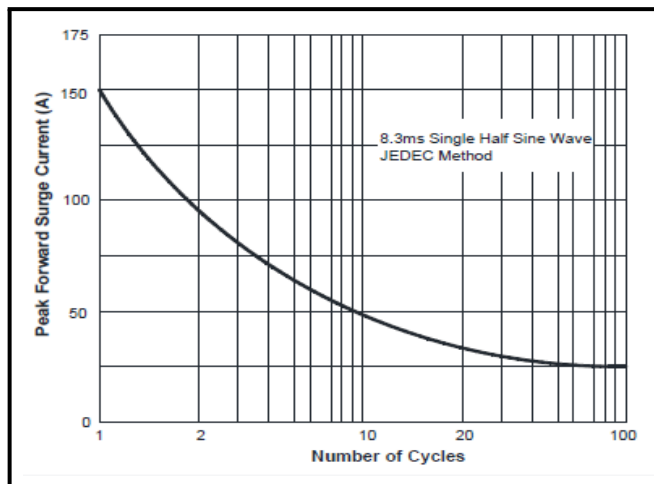


Figure 3: Typical Forward Voltage

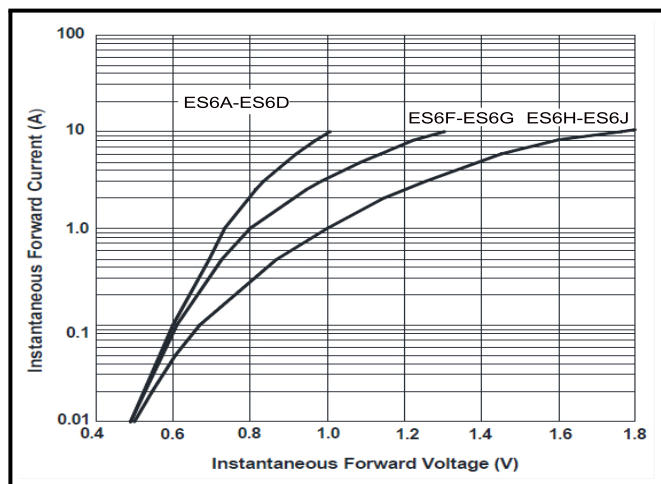
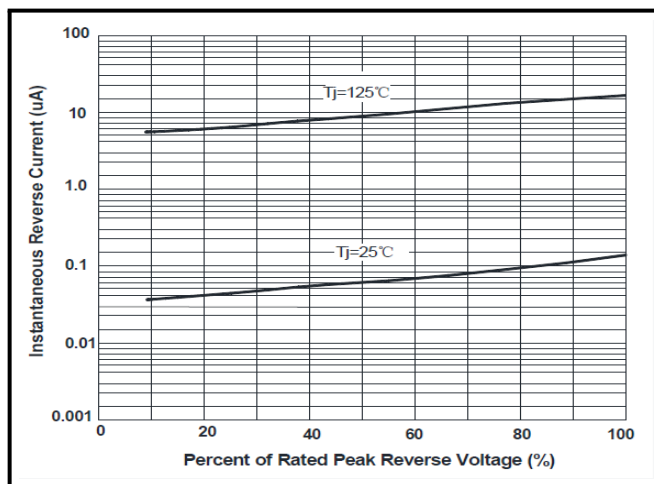


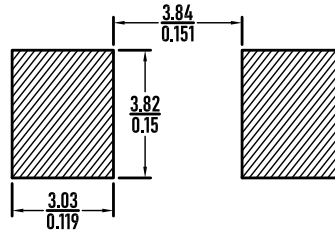
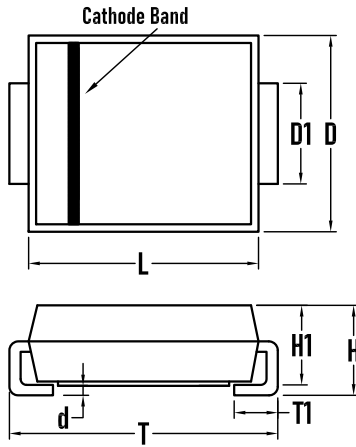
Figure 4: Typical Reverse Characteristics



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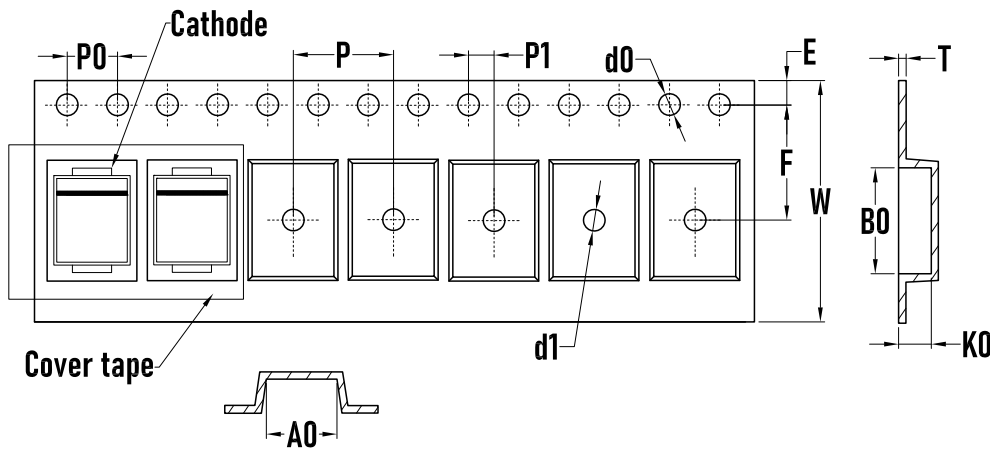
Package Mechanical Data - SMC



Note:
dimensions: $\frac{\text{mm}}{\text{inch}}$

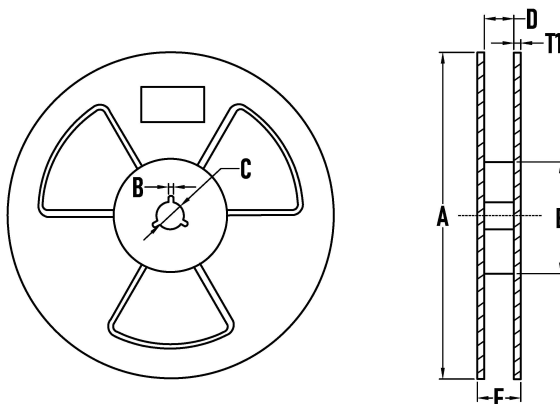
SYMBOL	MILLIMETER	
	MIN	MAX
D	5.75	6.15
D1	2.70	3.30
T	7.65	8.25
T1	0.90	1.50
d	—	0.3
H1	2.07	2.47
H	2.20	2.60
L	6.70	7.10

Packaging Tape - SMC



SYMBOL	MILLIMETER
A0	6.00±0.1
B0	8.25±0.02
d0	1.50±0.1
d1	1.50±0.1
E	1.75±0.1
F	7.50±0.1
K0	2.70±0.1
P	8.00±0.1
P0	4.00±0.1
P1	2.00±0.05
W	16.00±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	16±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

