



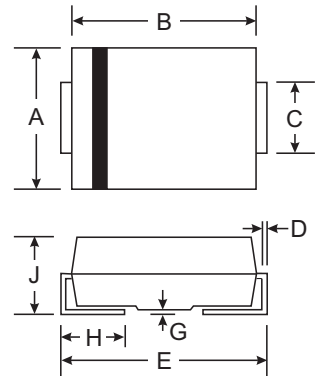
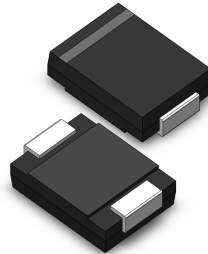
# ES3KC THRU ES3MC

## Super Fast Recovery Rectifier Diode

**VOLTAGE RANGE: 800-1000V**  
**POWER: 3.0A**

### Mechanical Data

- Case: SMC/DO-214AB, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.21 grams (approx.)



### Limiting Values (Absolute Maximum Rating)

Item	Symbol	Unit	Test Conditions	ES3	
				K	M
Repetitive Peak Reverse Voltage	$V_{RRM}$	V		800	1000
<b>Maximum RMS Voltage</b>	$V_{RMS}$	V		560	700
Average Forward Current	$I_{F(AV)}$	A	60HZ Half-sine wave, Resistance load, $T_L=100^\circ\text{C}$	3.0	
Surge(Non-repetitive)Forward Current	$I_{FSM}$	A	60Hz Half-sine wave ,1 cycle , $T_a=25^\circ\text{C}$	100	
Junction Temperature	$T_J$	$^\circ\text{C}$		-55~+150	
Storage Temperature	$T_{STG}$	$^\circ\text{C}$		-55 ~ +150	

### Electrical Characteristics (T =25°C Unless otherwise specified)

Item	Symbol	Unit	Test Condition	ES3	
				K	M
Peak Forward Voltage	$V_F$	V	$I_F=3.0\text{A}$	4.0	
Maximum reverse recovery time	$t_{rr}$	ns	$I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$	35	
Peak Reverse Current	$I_{RRM1}$	$\mu\text{A}$	$V_{RM}=V_{RRM}$	$T_a=25^\circ\text{C}$	5
	$I_{RRM2}$			$T_a=100^\circ\text{C}$	50
Thermal Resistance(Typical)	$R_{\theta J-A}$	$^\circ\text{C/W}$	Between junction and ambient	40 <sup>1)</sup>	
	$R_{\theta J-L}$		Between junction and terminal	12 <sup>1)</sup>	

### Notes:

Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.3" x 0.3" (8.0 mm x 8.0 mm) copper pad areas



FIG. 1- FORWARD CURRENT DERATING CURVE

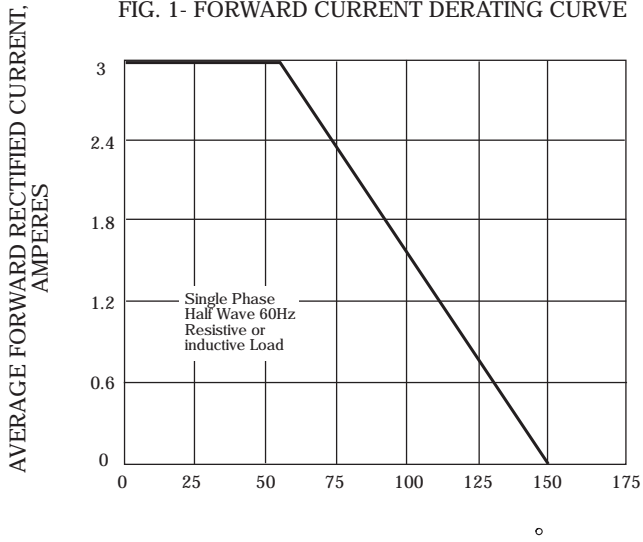


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

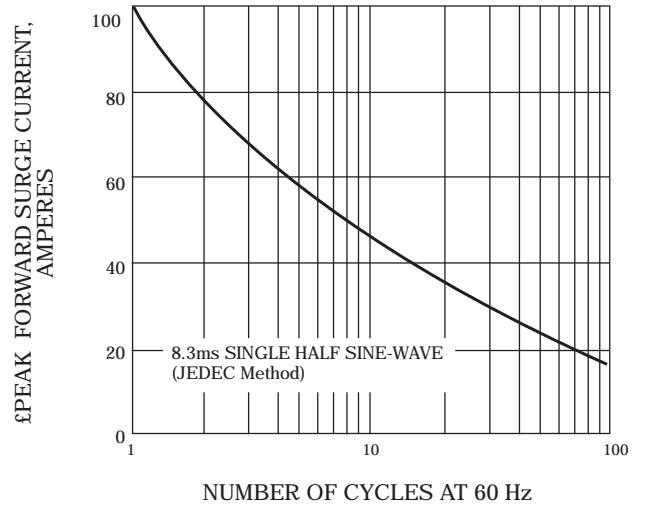


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

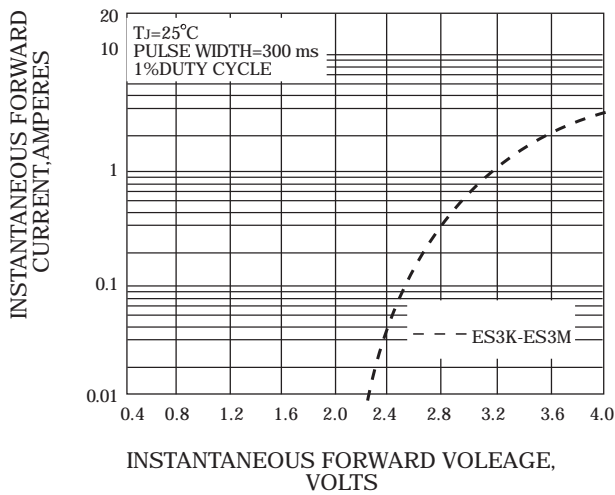
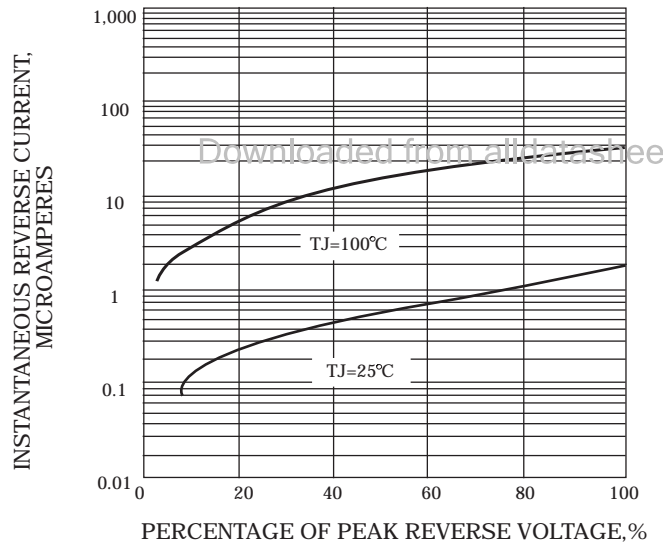
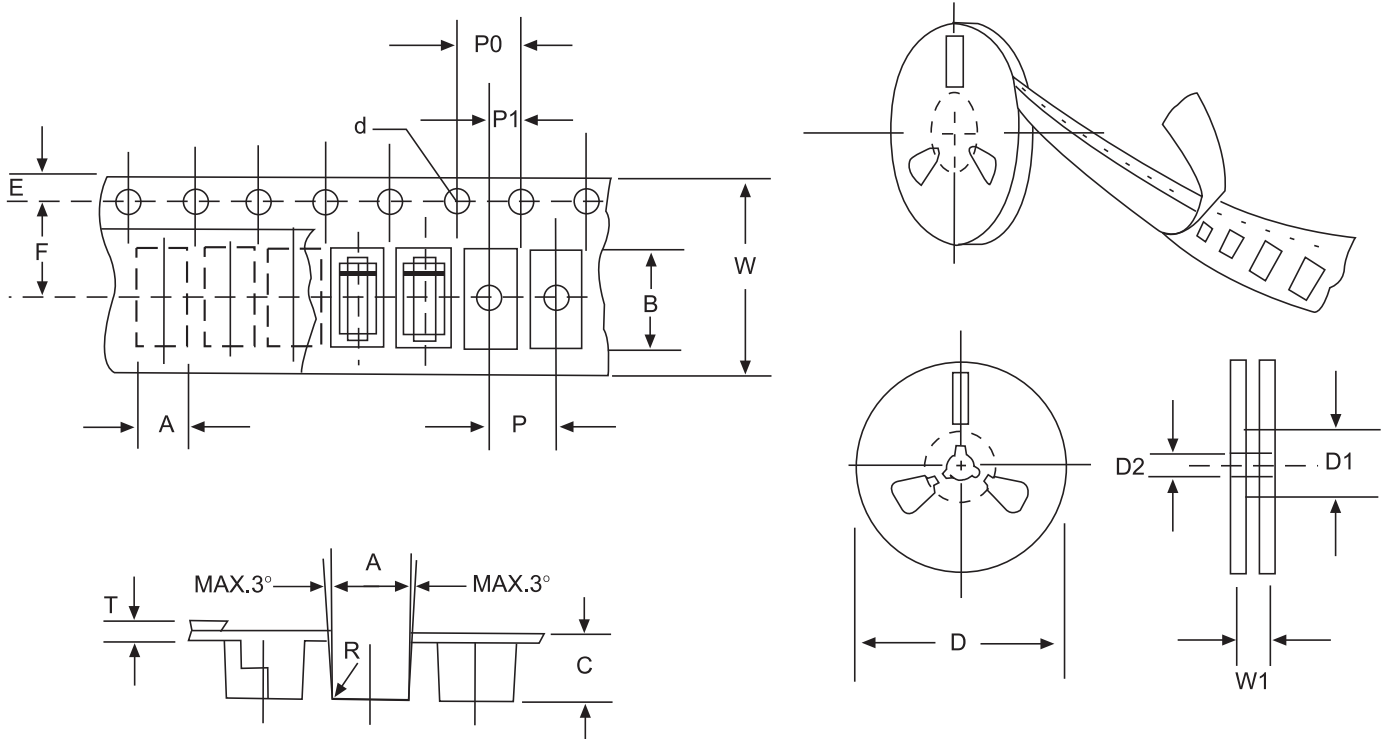


FIG. 4-TYPICAL REVERSE CHARACTERISTICS



# Reel Taping Specifications For Surface Mount Devices–SMC



**FIG:CONFIGURATION OF AXIAL TAPING**

ITEM	SYMBOL	SMC mm (inch)
Carrier width	A	6.05±0.1(0.238±0.004)
Carrier length	B	8.31±0.1(0.327±0.004)
Carrier depth	C	2.50±0.1(0.100±0.004)
Sprocket hole	d	1.5±0.1(0.059±0.004)
Reel outside diameter	D	330/281/178±2(13/11/7±0.079)
Reel inner diameter	D1	8.0±0.2(0.315±0.008)
Feed hole diameter	D2	13±0.5(0.512±0.020)
Sprocket hole position	E	1.5±0.1(0.059±0.004)
Punch hole position	F	7.65±0.05(0.301±0.002)
Punch hole pitch	P	8.0±0.1(0.315±0.004)
Sprocket hole pitch	P0	4.0±0.1(0.157±0.004)
Embossment center	P1	2.0±0.1(0.079±0.004)
Total tape thickness	T	0.3±0.1(0.012±0.004)
Tape width	W	16.0±0.2(0.630±0.008)
Reel width	W1	24.0±2.0(0.945±0.079)

NOTE: Devices are packed in accordance with EIA standard RS-481-A and specification given above.