

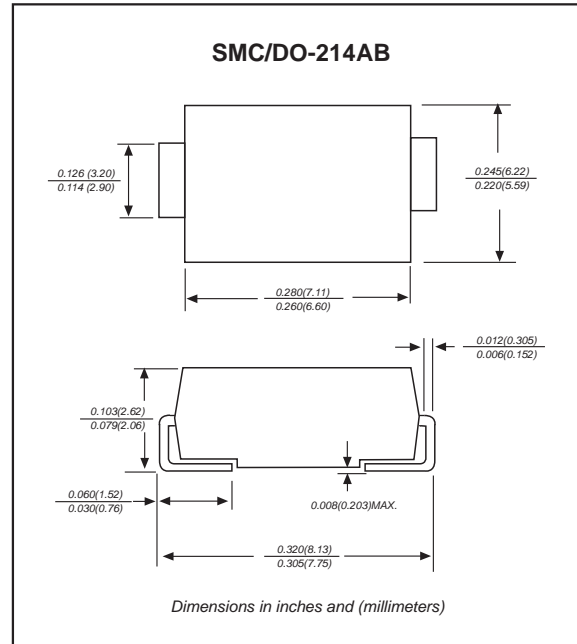
### Features

- ▶ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ▶ For surface mounted applications
- ▶ Super fast switching for high efficiency
- ▶ Low reverse leakage
- ▶ Built-in strain relief, ideal for automated placement
- ▶ High forward surge current capability
- ▶ High temperature soldering guaranteed: 250°C/10 seconds at terminals
- ▶ Glass passivated chip junction
- ▶ Compliant to RoHS Directive 2011/65/EU
- ▶ Compliant to Halogen-free
- ▶ Suffix"-Q1" for AEC-Q101

### Mechanical data

- ▶ **Case:** JEDEC DO-214AB molded plastic body
- ▶ **Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026
- ▶ **Polarity:** Color band denotes cathode end
- ▶ **Mounting Position:** Any

### Package outline



### Maximum ratings and Electrical Characteristics (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

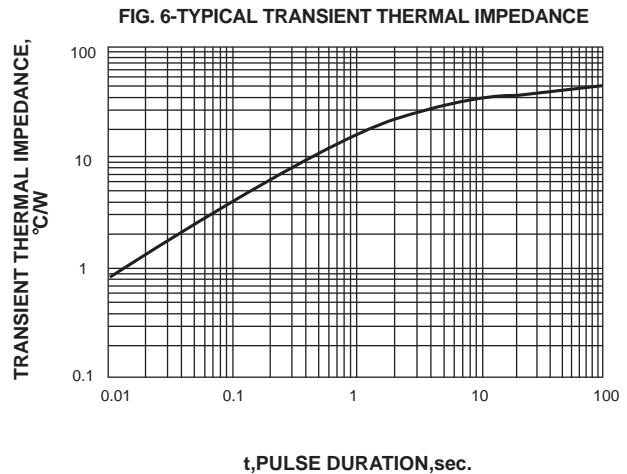
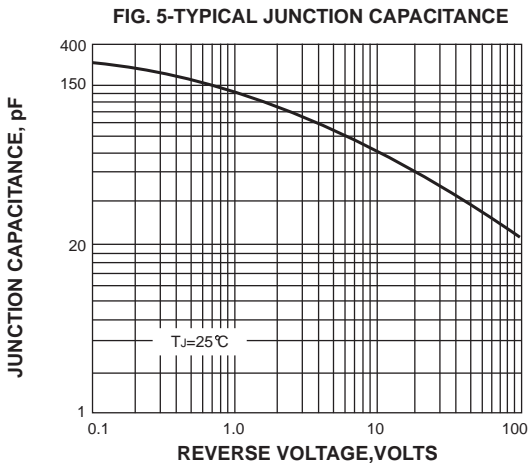
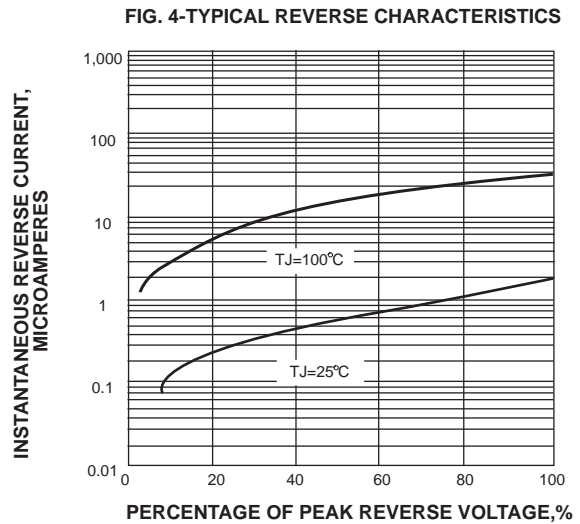
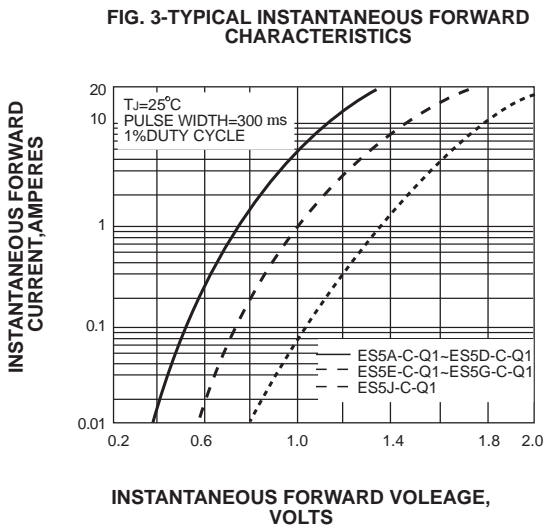
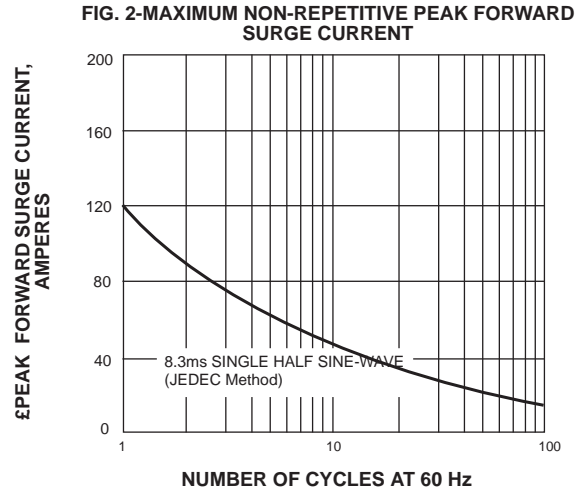
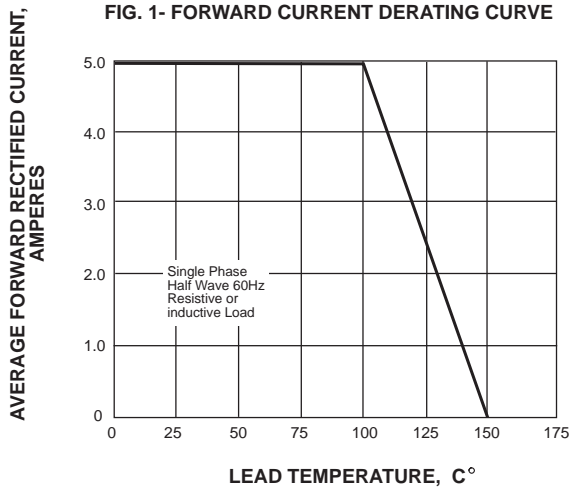
PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.2	$I_O$			5.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC methode)	$I_{FSM}$			120	A
Reverse current	$V_R = V_{RRM}$ $T_A = 25^\circ\text{C}$	$I_R$			5.0	$\mu\text{A}$
	$V_R = V_{RRM}$ $T_A = 100^\circ\text{C}$				50	
Thermal resistance	Junction to ambient NOTE 1	$R_{\theta JA}$		40		$^\circ\text{C/W}$
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	$C_J$		180		pF
Storage temperature		$T_{STG}$	-65		+150	$^\circ\text{C}$

SYMBOLS	$V_{RRM}^{*1}$ (V)	$V_{RMS}^{*2}$ (V)	$V_R^{*3}$ (V)	$V_F^{*4}$ (V)	$t_{rr}^{*5}$ (ns)	Operating temperature $T_{Jr}$ ( $^\circ\text{C}$ )
ES5A-C-Q1	50	35	50	1.00	35	-55 to +150
ES5B-C-Q1	100	70	100			
ES5C-C-Q1	150	105	150			
ES5D-C-Q1	200	140	200	1.30	35	-55 to +150
ES5E-C-Q1	300	210	300			
ES5G-C-Q1	400	280	400	1.70	35	-55 to +150
ES5J-C-Q1	600	420	600			



- \*1 Repetitive peak reverse voltage
- \*2 RMS voltage
- \*3 Continuous reverse voltage
- \*4 Maximum forward voltage@ $I_F=5.0\text{A}$
- \*5 Maximum Reverse recovery time, note 2

**Note:** 1.P.C.B. mounted with 0.2x0.2"(5.0x5.0mm) copper pad areas  
 2. Reverse recovery time test condition,  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$

### Rating and characteristic curves



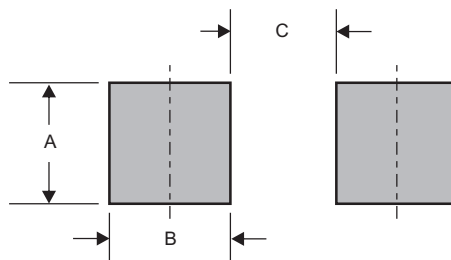
### Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

### Marking

Type number	Marking code
ES5A-C-Q1	ES5A
ES5B-C-Q1	ES5B
ES5C-C-Q1	ES5C
ES5D-C-Q1	ES5D
ES5E-C-Q1	ES5E
ES5G-C-Q1	ES5G
ES5J-C-Q1	ES5J

### Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SMC	0.132 (3.30)	0.100 (2.50)	0.176(4.40)