

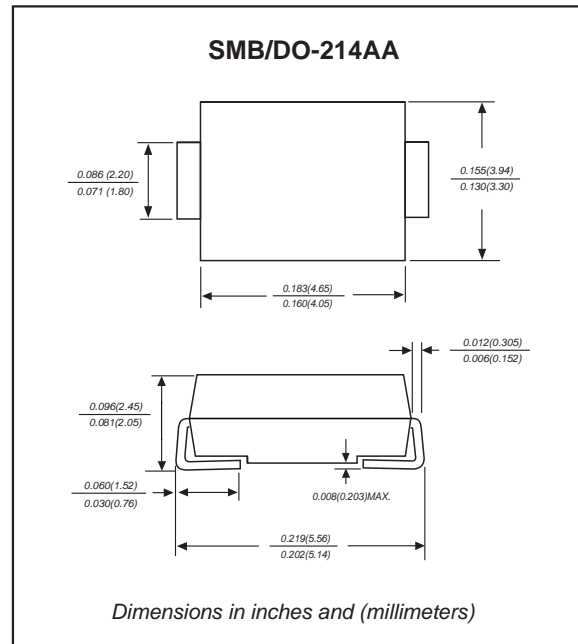
Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Ultra 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-214AA 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°C unless otherwise noted)

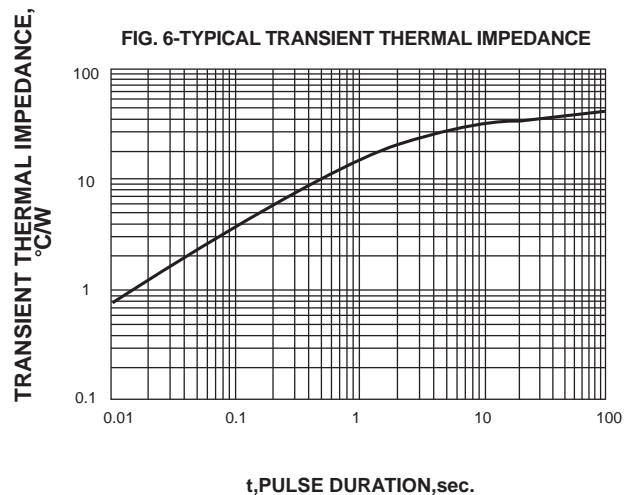
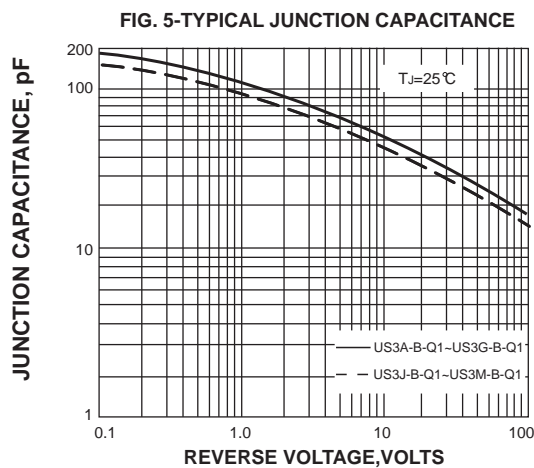
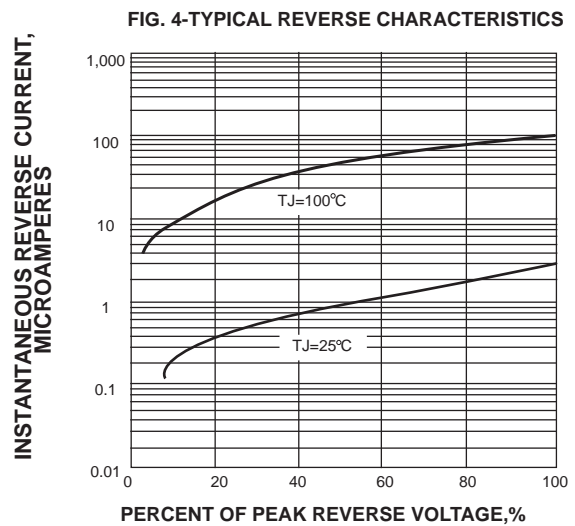
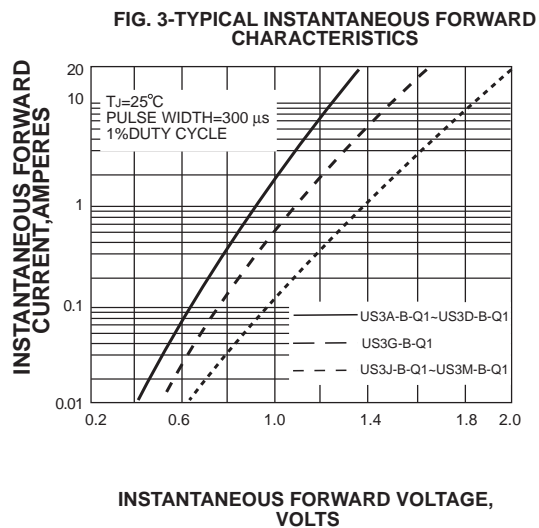
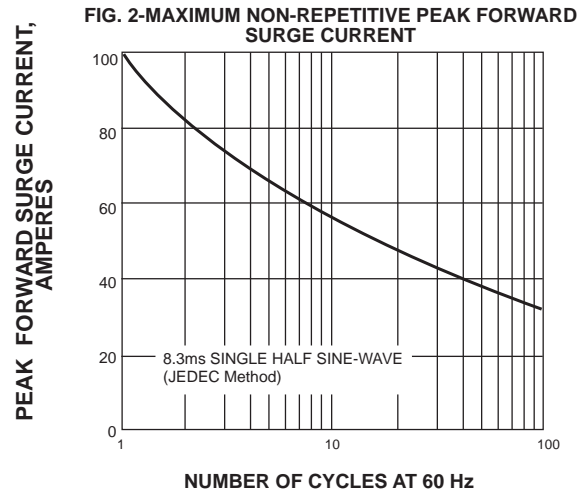
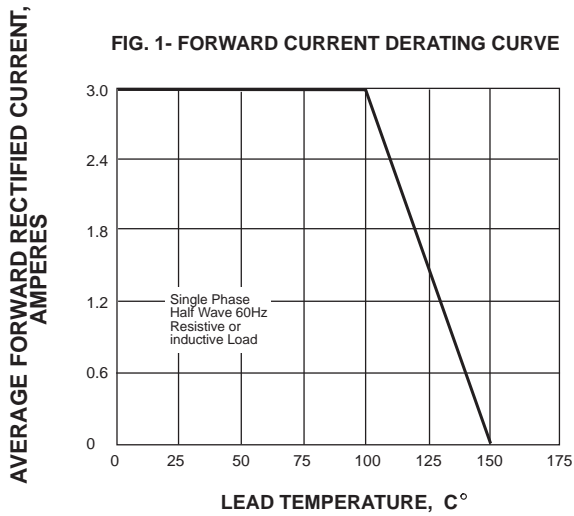
PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.1	I _O			3.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC methode)	I _{FSM}			100	A
Reverse current	V _R = V _{RRM} T _A = 25°C	I _R			5.0	μA
	V _R = V _{RRM} T _A = 100°C				50	
Thermal resistance	Junction to ambient NOTE 1	R _{θJA}		65		°C/W
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	C _J		50		pF
Storage temperature		T _{STG}	-65		+150	°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 _J (°C)
US3A-B-Q1	50	35	50	1.00	50	
US3B-B-Q1	100	70	100			
US3D-B-Q1	200	140	200			
US3G-B-Q1	400	280	400	1.40		
US3J-B-Q1	600	420	600	1.70	75	
US3K-B-Q1	800	560	800			
US3M-B-Q1	1000	700	1000			



- *1 Repetitive peak reverse voltage
- *2 RMS voltage
- *3 Continuous reverse voltage
- *4 Maximum forward voltage@I_F=3.0A
- *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=0.5A, I_R=1.0A, I_{RR}=0.25A

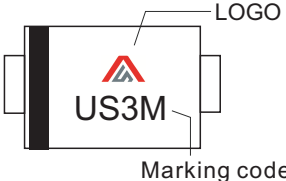
Rating and characteristic curves



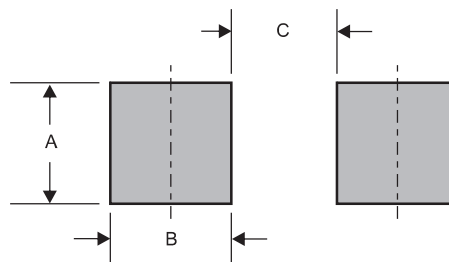
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code	Example
US3A-B-Q1	US3A	
US3B-B-Q1	US3B	
US3D-B-Q1	US3D	
US3G-B-Q1	US3G	
US3J-B-Q1	US3J	
US3K-B-Q1	US3K	
US3M-B-Q1	US3M	

Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SMB	0.090(2.30)	0.098(2.50)	0.070(1.80)