

## Features

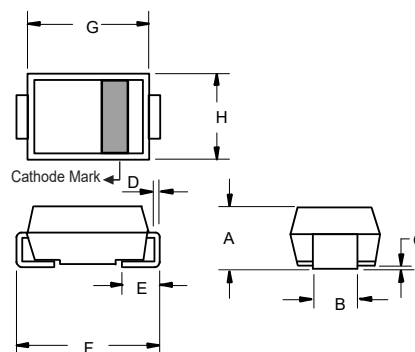
- Halogen Free. "Green" Device (Note 1)
- Glass Passivated Chip
- Super Fast Switching For High Efficiency
- Low Reverse Leakage Current
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant (Note 2)("P" Suffix Designates RoHS Compliant. See Ordering Information)

## Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	1200	V
Working Peak Reverse Voltage	$V_{RWM}$		
DC Blocking Voltage	$V_R$		
RMS Reverse Voltage	$V_{RMS}$	840	V
Average Rectified Forward Current @ $T_L=60^\circ\text{C}$	$I_{F(AV)}$	3	A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	$I_{FSM}$	80	A
Non-Repetitive Peak Surge Current @ 1ms Square Wave		160	
Current Squared Time @ $1\text{ms} \leq t \leq 8.3\text{ms}$	$I^2t$	26.56	$\text{A}^2\text{s}$

# 3 Amp Ultra Fast Rectifier 1200 Volts

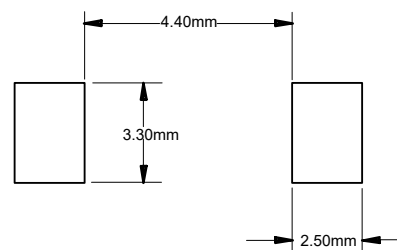
## SMC (DO-214AB)



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.079	0.103	2.00	2.62	
B	0.108	0.128	2.75	3.25	
C	0.002	0.008	0.051	0.203	
D	0.006	0.012	0.152	0.305	
E	0.030	0.060	0.76	1.52	
F	0.305	0.320	7.75	8.13	
G	0.260	0.280	6.60	7.11	
H	0.220	0.245	5.59	6.22	

Marking Diagram	Internal Structure
<p>Marking Code: US3Q</p>	

## Suggested Solder Pad Layout



- Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.  
2. High Temperature Solder Exemption Applied, see EU Directive Annex 7a.

## Thermal characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
$T_J$	Operating Junction Temperature Range		-55		150	°C
$T_{stg}$	Storage Temperature Range		-55		150	°C
$R_{th(J-L)}$	Thermal Resistance from Junction to Lead	Note 1		15		°C/W
$R_{th(J-A)}$	Thermal Resistance from Junction to Ambient	Note 1		65		°C/W

Note:

1. Mounted on P.C.B. with 16mm\*16mm copper pad areas.

## Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	$V_F$	$I_F=3A; T_J=25^\circ C$			2.40	V
Reverse Current	$I_R$	at Rated $V_R; T_J=25^\circ C$ at Rated $V_R; T_J=125^\circ C$			5 200	$\mu A$
Reverse Recovery Time	$t_{rr}$	$I_F=0.5A; I_R=1.0A; I_{rr}=0.25A; T_J=25^\circ C$			75	nS
Junction Capacitance	$C_J$	$V_R=4V; f=1MHz; T_J=25^\circ C$		24		pF

**Curve Characteristics**

Fig. 1 - Forward Current Derating Curve

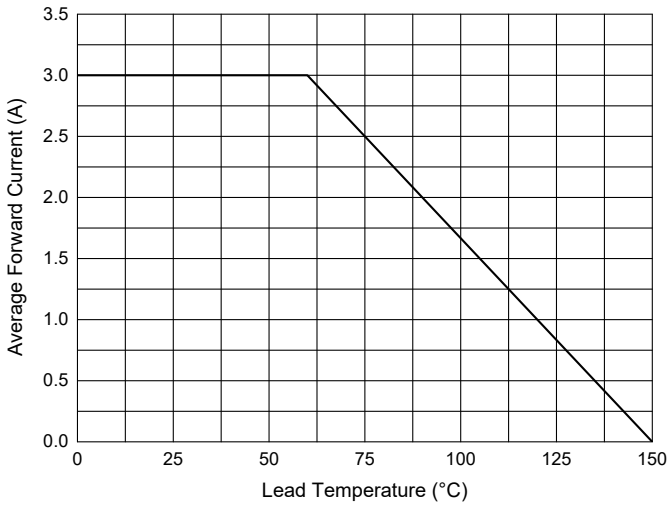


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

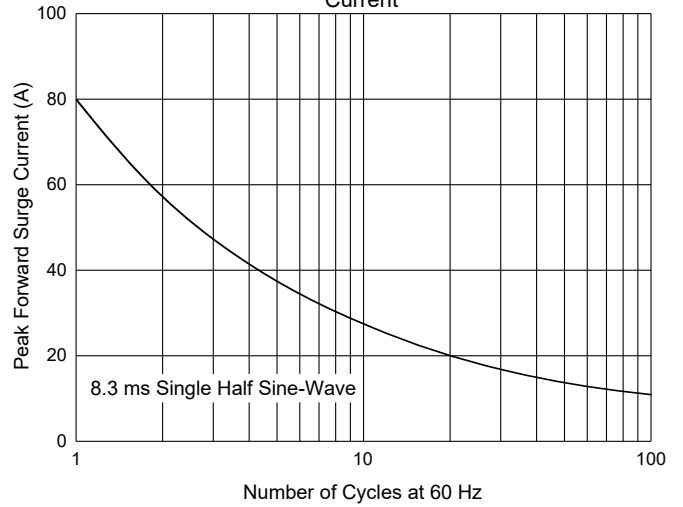


Fig. 3 - Typical Forward Characteristics

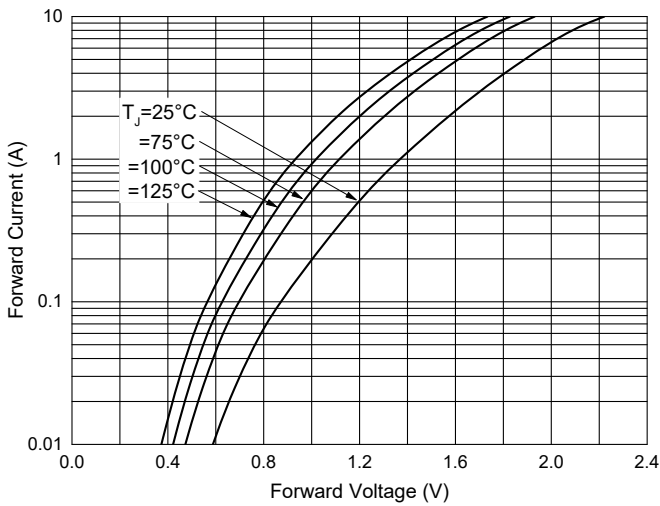


Fig. 4 - Typical Reverse Leakage Characteristics

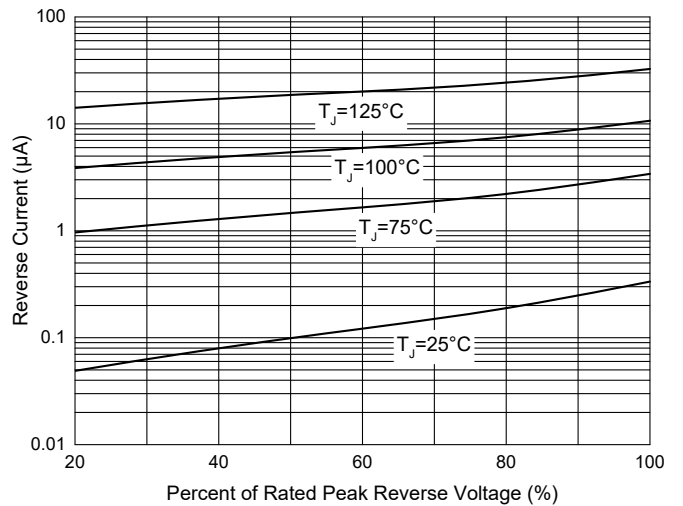
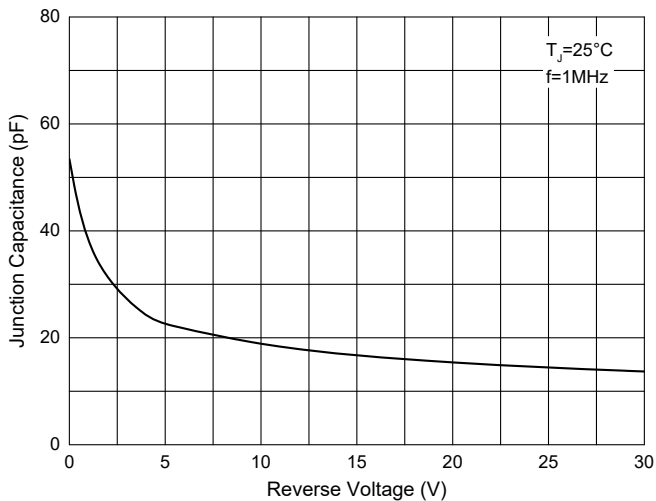


Fig. 5 - Typical Capacitance Characteristics



## Ordering Information

Device	Packing
US3Q-TP	Tape&Reel:3Kpcs/Reel

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